ABSTRACT
        This selective bibliography is one of nine documents
compiled to provide titles and descriptions of useful and informative
reading documents which were indexed into the ERIC system from 1966
to 1974. The 131 entries in this section of the bibliography concern
reading readiness and are arranged alphabetically by author in one of
the following eight subcategories: preschool programs (disadvantaged
youth, perceptual development, and tutorial programs); prereading
skills; early experience; predictive measurement; bilingual
education; curriculum guides (reading readiness); research; and
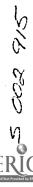beginning reading. Author and subject indexes conclude the document.
(JM)

A Selective Bibliography of ERIC Abstracts for the
Teacher of Reading, 1966-1974;
III: Reading Readiness

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Introduction

One of the primary goals of the National Institute of Education and the
Educational Resources Information Center (ERIC) is to transform the information
found in the ERIC system into a format that will be useful to t⁺: classroom teacher,
the administrator, and the curriculum developer. Such is the goal of this biblio-
graphy, which brings together titles and descriptions (abstracts) of useful and
informative reading documents that were indexed into the ERIC system during the
years from 1966 to 1974.

Using the descriptors Reading, Reading Research, and Reading Instruction, a
computer search was made of the ERIC data base. Of the 5000 documents that were
obtained through the search, 3000 entries were in the system at Level I or Level
II, that is, were available on microfiche or in hard copy, a photographically
reproduced, paper booklet. Each of these 3000 entries was considered for inclusion
in the bibliography.

To aid in the selection of items for the bibliography, nine criteria were
developed:

1. The study contributes to the profession through the use of constructive
research procedures.

2. The information adds to current understanding of the reading process.

3. The docume⁺t ⁻elps the teacher with realistic suggestions for classroom
practices.

4. The study indicates trends for the teaching of reading; organizational
patterns; methodology; and/or materials.

5. The document helps teachers to apply theories of learning to the teaching
of reading.

6. The study clarifies the relationship of reading to other disciplines, such
as linguistics and psychology.

7. The study leads to understanding special problem areas in teaching reading.

8. The document helps teachers to build curriculum or gives guidance in planning lessons.

9. The document will help readers to understand the state of the profession or the professionalism in the teaching of reading.

The criteria were reviewed and refined by Robert Emans, University of Maryland; Robert Bennett, San Diego (California) School District; Richard Hodges, University of Chicago; William Powell, University of Florida at Gainesville; Charles Neff, Xavier University; and Joanne Olsen, University of Houston.

In order to be included in the bibliography, a document had to meet at least four of the nine criteria. Of the 3000 documents evaluated, 1596 were able to satisfy the requirements and were included. This section of the bibliography, Reading Readiness, has 131 entries. Other categories are:

1. Reading Process (280 entries)

2. Methods in Teaching Reading (190 entries)

3. Reading Difficulties (115 entries)

4. Reading Materials (245 entries)

5. Adult Education (201 entries)

6. Tests and Evaluation (231 entries)

7. Reading in the Content Area (94 entries)

8. Teacher Education (109 entries)

Subcategories were organized within each major category, and items were put into alphabetical order by author. Entries were then given numbers consecutive throughout the nine separate sections, and an author index and a subject index were prepared for each section. The subject indexes were prepared using the five major descriptors which were assigned to each document when it was indexed into the ERIC system. In both the author and the subject indexes, each item is identified by its ED (ERIC

Document) number and by the consecutive number assigned to it in the bibliography.

Two other bibliographies are available which reading educators may find useful. They differ from this bibliography in that they are comprehensive rather than selective. Both of these publications include all the reading documents entered into the ERIC system by ERIC/RCS and by ERIC/CRIER. They are Recent Research in Reading: A Bibliography 1966-1969 and Reading: An ERIC Bibliography 1970-1972; both were published by Macmillan Information.

READING READINESS

I. Preschool Programs
A. Disadvantaged Youth
B. Perceptual Development
C. Tutorial Program

II. Prereading Skills

III. Early Experience

IV. Predictive Measurement

V. Bilingual Education

VI. Curriculum Guides (Reading Readiness)

VII. Research

VIII. Beginning Reading

Preschool Programs

Disadvantaged Youth

471. The Ameliorative Preschool Program, Champaign, Illinois. Preschool
      Program in Compensatory Education, 1. Palo Alto, Calif.: American
      Institute for Research in Behavioral Sciences, 1969, 12p. [ED 038
      469. HC not available from EDRS. Available from Superintendent of
      Documents, U.S. Government Printing Office (FS5.237:37054, $0.15)]

      This preschool program sponsored by the U.S. Office of Education
      offered a highly structured curriculum,in which language development
      was fostered through encouraging verbal responses in a game format
      context. Based on skills and concepts required for success in
      elementary school, the curriculum included language arts, reading
      readiness, mathematical concepts, science, and social studies. Small
      instructional groups of five pupils allowed the teacher to correct
      or reinforce verbal responses immediately. Directed play periods
      stressed visual-motor activities such as puzzles, blocks, clay,
      nesting and stacking toys, and pounding sets. Drawn from economi-
      cally depressed neighborhoods, two-thirds of the pupils were black
      and the remainder Caucasian. The results of six standardized tests
      administered at the end of the first grade showed that project
      pupils performed better than comparable pupils who had attended a
      traditional preschool. The program pupils, furthermore, scored well
      above grade level on the California Achievement Tests in reading,
      language, and arithmetic. Tables showing test data, and examples
      of specific activities used in the program are also included.

472. Bereiter, Carl. Acceleration of Intellectual Development in Early
      Childhood. Final Report. Urbana: University of Illinois, 1967,
      210p. [ED 014 332]

      The child's capacity for self-actuated intellectual growth, and the
      possibility of speeding up intellectual growth through improved
      opportunities and increased stimulation were studied. Six explor-
      atory studies carried out during the first two years of this project
      were reported. The three main areas of learning which were investi-
      gated with the idea of locating promising approaches were reading,
      creativity, and logical operations. These studies concerned (1)
      exploring the teaching of reading to very young children, (2) a
      teaching machine approach which showed some promise in the first
      study, (3) preferences for high-frequency versus low-frequency word
      use occurring in children's speech, (4) construction activities
      involving independent problem solving, and guided construction, (5)
      a method of inducing conservation of substance in kindergarten
      children, and (6) teaching formal logical operation to preschool
      children. Two other studies were discussed, including (1) use of
      direct verbal instruction in language, arithmetic, and reading with
      four-year-old disadvantaged children, and (2) comparison of a
      direct verbal instruction program with a Montessori program for
      four year olds. Results and conclusions were many and varied.

473. Berzonsky, Michael; Reidford, Philip. Field Test of an Academically Oriented Preschool Curriculum. Paper presented at the American Educational Research Association Conference, New York, February 18, 1967, 9p. [ED 015 839]

To support the premise that early education reduces environmental deprivation and to substantiate proposals advanced by Bereiter and Englemann in "Teaching Disadvantaged Children in Preschool," an experiment was conducted in a Head Start setting. Two classes, each consisting of twenty-four children ranging in age from three to eight and five to seven, attended preschool classes for two and one half hours daily at the McKinley School in York, Pennsylvania. Instructional content, teaching strategies, and preschool management procedures followed the program which Bereiter and Englemann outlined in their book. The children were also instructed in language, reading, and arithmetic for an hour each day for six months. The Stanford-Binet Intelligence Test was given during a two-week post-test period. A year later, two subtests of the Illinois Test of Psycholinguistic Abilities (Auditory Vocal Automatic and Auditory Vocal Association) were given to thrity-eight of the forty-eight children who then had eight months of preschool experience, two months of summer experience, and one month of kindergarten experience. Results indicated that long-term exposure to the Bereiter-Englemann preschool curriculum increased intelligence-quotient levels and stimulated development in reasoning ability, language facility, and understanding.

474. Boercker, Marguerite; Ramsey, Wallace. The Influence of a Head Start Program on Reading Achievement. Paper presented at the Annual Meeting of the International Reading Association, Seattle, May 4-6, 1967, 14p. [ED 012 685]

A study of the effects of attending an eight-week Head Start program during the summer prior to the first grade on the first grade reading achievement of 152 pupils in Scott County, Kentucky, indicated a need for a classroom continuation of the experience approach in reading methods. At the opening of the school year, the Head Start pupils were mixed in fifteen first grade rooms. Some teachers used a synthetic, and some an analytic, approach to reading. The Metropolitan Readiness Test was given in October, The California Test of Mental Ability in December, and the Stanford Achievement Test in May. Occupations of parents were categorized by use of the Socioeconomic Scale of Occupations devised by A.M. Edwards. A straight and unequated comparison of the reading scores of the two groups revealed no significant difference in achievement. Evidently, the Head Start program achieved success in preparing children for academic learning. The study also indicated a need for some radical approach to teaching reading to children whose normal dialect is nonstandard English. Substantial further experimentation and study are necessary for Head Start to achieve its full promise. Correlations on five variables substantiate the study. A summary of findings is included and references are given.

475. Cutts, Warren G. Reading Unreadiness in the Underprivileged. 1963, 3p. [ED 001 873]

Culturally deprived children have difficulty mastering basic communication skills.. While underprivileged children can communicate among themselves at a rather high level of fluency, their one-word sentences, strange speaking noises, and irregularities prevent the development of basic reading readiness skills. A fundamental necessity in overcoming the problem of oral language deficiencies in underprivileged children is a proper teacher attitude. In many cases the children's background in English instruction must be approached as if one were teaching a foreign language. The teacher needs to realize that vocabulary and language concepts develop slowly. He must learn to accept each child as he is and respect him as an individual. Whatever the school's approach, it is also extremely important to overcome the handicaps of cultural deprivation, particularly in regard to reading readiness. One suggested innovation concerns programs at the preschool level, such as day camps and nursery schools, to provide experiences in oral communication during the early formative years. These programs would also provide valuable parent-teacher cooperation. Culturally deprived children have much to contribute to society, but they must understand that without better language mastery, they cannot bridge the gap between themselves and profitable occupations. School and preschool programs can never fully compensate for deficiencies in experiences; however, such programs can do much in overcoming a poor start and preventing children from falling hopelessly behind in their education.

476. Di Lorenzo, Louis T.; and others. Empirical Bases for a Prekindergarten Curriculum for Disadvantaged Children. Paper presented at the Annual Convocation of the Educational Research Association of New York State, November 7, 1968, 15p. [ED 030 542]

This project was undertaken to establish a basis for a compensatory curriculum for disadvantaged preschool children by using existing empirical data to identify factors that predict success in reading comprehension and that differentiate the disadvantaged from the nondisadvantaged. The project focused on factors related to success in learning to read, which was equated with reading comprehension. The literature on reading and on the disadvantaged was reviewed, and lists of factors predicting success in reading comprehension and differentiating between disadvantaged and nondisadvantaged children were established. Common factors from the lists of factors and differentiators in their final rank order were (1) reading letters and numbers, (2) auditory discrimination, (3) figure and pattern copying, (4) auditory word association and analogy, (5) auditory word-picture discrimination, (6) figure and pattern matching, and (7) visual design memory and recall. References and tables are included.

477. Di Lorenzo, Louis T.; and others. Kindergarten Programs for the Disadvantaged: A Third-Year Report on an Evaluative Study. Albany:

New York State Education Department, 1968, 28p. [ED 030 541]

Results of ESEA/Title I programs designed to prepare educationally
disadvantaged children for school in eight New York State school
districts are contained in the three-year report on a total population
of 1,805 children. Standardized intelligence and readiness
tests given at the beginning and end of prekindergarten were used
to determine the effectiveness of the programs. It was found that
such programs were beneficial for disadvantaged but not for non-
disadvantaged participants, that certain programs stressing language
development were most beneficial, that program effectiveness
increased over the three years, that boys and girls benefited equally,
that disadvantaged white children benefited more than did disadvan-
taged nonwhite children, and that no significant interaction occurred
between sex and race. A study of standardized test scores after the
kindergarten year showed a continuance of these effects. Further
studies are planned involving testing at the end of grade one.
References and tables of results are included.

478. Gray, Susan W.; Klaus, Rupert A. An Experimental Preschool Program
for Culturally Deprived Children. Paper presented at the Annual
Meeting of the American Association for the Advancement of Science,
Montreal, December 29, 1964, 12p. [ED 001 813]

The experiments attempted to measure achievement, motivation, delay
of gratification, aspects of perception development, cognition, and
language of culturally deprived preschool children. There were four
experimental groups--children attending summer school for three
years and having contacts with a home visitor in the fall, winter,
and spring months; children attending summer school for two years
and having similar home visitor contacts; a control group in the
same town; and an additional control group in another town. Every
group of twenty-two children had one head teacher plus four small
group teachers. Activities used included field trips, counting
exercises, language development exercises, (i.e., dramatizing such
simple stories as "Little Red Riding Hood" and "The Little Red
Hen"), and reading to the children. Proper evaluation of the
experiment cannot be made until the children have attended school
for a number of years. However, on an elaborate battery of pre-
school screening tests given to all children entering the first
grade in the main city, the experimental children scored higher
than the controls and tended to approximate the nondeprived children
in the school. They were also superior on reading readiness tests.

479. Head Start Evaluation and Research Center, Tulane University.
Annual Report. New Orleans: Tulane University. Head Start
Evaluation and Research Center. August 31, 1968, 83p. [ED 029 705]

To measure the effects of group programed instruction on aspects of
reading in Head Start children, the Sullivan Associates Readiness
in Language Arts Series was used with approximately fifteen chil-
dren in each of five Head Start classes. An equal number served as
controls. Pretests and posttests were the Lee-Clark Readiness

Test, Murphy-Durrell Analysis, and Gates Reading Readiness Tests. Data provided evidence that the experimental groups had greater achievement in (1) recognition of letter symbols, (2) identifying names of letters, and (3) familiarity with numbers and printed letters of the alphabet. The control groups made greater advances in (1) both similarities and differences in word formation, (2) learning more words in one day under standard conditions of presentation, and (3) being able to understand oral instructions and sensitivity to sounds of words. Studies are underway in three more areas: moral judgment in young children as a function of selected abilities, behavioral correlates of nutritional states in young children, and conditions under which Head Start's benefits to children and families are maximized. Procedures are outlined for these projects.

480. Johnson, Marjorie Seddon; Kress, Roy A., eds. Significant Issues in Reading. Proceedings of the Annual Reading Institute at Temple University of the Commonwealth System of Higher Education, 1966. Vol. 5, 1968, 119p. [ED 024 531. Document not available from EDRS. Available from Reading Clinic, Department of Psychology, Temple University]

The twelve papers in this volume examine issues of import in the field of reading by first identifying and defining the crucial issues and then providing for their illumination. Some issues discussed are comprehension, evaluation, research, and vocabulary. Also discussed are beginning reading, remedial reading, reading materials, word recognition, content reading, and study skills. Other issues include educationally disadvantaged preschool children and a linguistic approach to reading. Attention is directed to continuing problems to be faced in helping students toward maximum achievement in the field of reading.

481. Jones, Shuell H. Curricular Intervention in Language Arts Readiness for Head Start Children. Tulane University, Head Start Evaluation and Research Center Annual Report to the Office of Economic Opportunity, August 31, 1969, 74p. [ED 038 175]

The purpose of the study was to determine the effectiveness of a "packaged" language development program on the general cognitive, intellectual, and language development of preschool children. A selected basic language program (Buchanan Language Readiness Program) and supplementary materials (other language programs), were used to collect data on thirteen Head Start classes in Mississippi and Alabama. Different levels of teacher preparation and/or variations in the use of supplementary materials and reinforcement procedures were part of the research design. Four trained classroom monitors, using an intervention checklist designed for the study, reported observations each week for the five experimental groups and twice monthly for the two control groups. (A lengthy anecdotal record is included in this report.) Children were pretested and posttested on selected measures of language development. The standardized tests did not yield significant achievement

results, but because of a late start, the prescribed language
program was not completed. It is recommended that the following
areas receive emphasis: teacher inservice training and supervision,
adequate preparation of aides before they are placed in the class-
room, parent involvement, and longitudinal studies of children in
curricular intervention studies.

482. Kershner, Keith M. Pennsylvania Preschool and Primary Education
      Project: 1968-1969, Final Report to the Ford Foundation. Harris-
      burg: Pennsylvania State Board of Education, and Pennsylvania
      State Department of Public Welfare, October 1969, 161p. [ED 033
      759]

      To improve the education of culturally disadvantaged children, this
      Ford Foundation project focused on children's specific behavioral
      deficits, teacher preparation, parent attitudes, health and service
      agencies, and local school districts. The project was carried out
      in a rural Appalachian school with 122 children, 30 percent negro
      and 70 percent white, and in an urban school with 350 children, 95
      percent white and 5 percent nonwhite. Both schools were in low
      income areas. An emphasis on individualization and an ungraded
      teaching approach was used in the rural school for children in
      kindergarten through third grade. Teachers met with testing and
      curriculum consultants, parents attended group meetings, and future
      program plans were made by the local school district. The urban
      school program was similar but had a more active and successful
      parent education program and better coordination of agencies. To
      evaluate the program, all children were pretested and posttested,
      using the Oral Language Scale, the Science and Math Study Group
      Individual Math Inventory, the Metropolitan Achievement Test, and
      the California Test of Mental Maturity. There were no control
      groups. Both groups of children showed significant cognitive gains,
      and teachers in both schools improved in knowledge of education for
      the culturally deprived.

483. Kraus, Philip E. Diagnosis and Special Instruction in Reading: A
      Program to Strengthen Early Childhood Education in Poverty Area
      Schools. Evaluation of ESEA Title I Projects in New York City,
      1967-68. New York: Center for Urban Education, N.Y. Educational
      Research Committee, October 1968, 39p. [ED 034 001]

      This project, sponsored by the New York City Board of Education, was
      aimed at correcting reading difficulties in first and second grades
      in order to prevent later reading retardation, and was implemented
      in twenty-two of the twenty-six school districts eligible to receive
      Title I funds. Evaluation procedures, personnel, implementation
      patterns, affiliated hospital and university plans, reading clinic
      plans, and a summary of findings and recommendations are covered in
      this report.

484. Pierce-Jones, John; Cunningham, Grover. Curricular Intervention to
      Enhance the English Language Competence of Head Start Children.
      Part of the Final Report on Head Start Evaluation and Research:

1968-69 to the Office of Economic Opportunity. Texas University, Austin: Child Development Evaluation and Research Center, August 1969, 150p. [ED 039 032]

This research was designed to assess the effects of various curriculum materials and different levels of teacher training on the cognitive, intellectual, and language development of full-year head start children who were given intensive language training. The curriculum materials used were the "Sullivan-Buchanan Readiness Program," the "Sullivan Enrichment Supplement," the "Swanson Supplement," and the "Reinstein Reinforcement Program," which are described in detail. There were three control groups and ten experimental groups (five each of English and Spanish speakers) grouped according to curriculum materials and levels of teacher training. Children were pretested and posttested on a battery of language and intelligence tests to determine the extent of changes in their language competence. There were significant pretrial intergroup differences on the dependent variables; however, results must be seen in the light of differing subject populations. The experimental groups who received a structured language program showed more improvement than the control groups who did not. More than one-half of this document is comprised of data in tabular form.

485. Larsen, Janet J. Yes, Head Start Improves Reading! Unpublished research, University of Florida, Gainsville, 1972, 15p. [ED 079 693]

This study evaluated the effect of a Head Start program on children's intelligence and reading achievement test scores over a three year period. Each of 25 Head Start children was paired with a non-Head Start child of the same race, sex, age, socioeconomic status, date of school entrance, kindergarten experience, promotion record, and type of school. The second part of the study involved a three year followup assessment of intelligence test scores of children who had attended Head Start before entry into school. The conclusion was reached that Project Head Start had been effective in preparing children for later reading achievement, as determined by the word meaning subtest of the Stanford Achievement Test. The durability of this effect was demonstrated over a three year span. Intelligence, as measured by the Stanford-Binet Intelligence Test, improved during the longitudinal study, but the preschool program could not be given credit for the positive change. The author recommends continued longitudinal research in preschool compensatory education.

486. Preprimary Program. 1968 Report. Pittsburgh: Pittsburgh Public Schools, 1968, 50p. [ED 027 072]

An evaluation of the Pittsburgh Public Schools preprimary program for 2,000 disadvantaged children for the Office of Economic Opportunity concluded that the program contributed to the socioemotional maturation of the children involved, but did not affect their reading readiness or first grade reading test scores. This finding may be explained in part by a lack of specific academic achievement

objectives in the program design. The evaluation processes also
showed a need for a more detailed definition of desired teacher
behavior. Each teacher was observed for one hour on two separate
occasions in accordance with an observation schedule, to find out
the number and kind of adult-child interactions in the classroom.
Each child was rated by his teacher on the children's Rating Scale
developed in the Pittsburgh project. Analysis of the data led to
the recommendation that more specific guidelines be established for
classroom personnel concerning their duties, ways of reinforcing
learning behavior, use of individualized instruction, and academic
skill development. Over half of this report is made up of appendixes,
which include a detailed description of the primary program and
facsimiles of the rating scale and observation schedule.

487.   Regional Research and Resource Center in Early Childhood. Final
        Report. New York: New York University, 1968, 91p. [ED 028 846]

        Qualitative and Quantitative Evaluations were made of the 1967-68
        academic period, the sixth year of demonstration classes, conducted
        by the Institute for Developmental Studies at New York University
        for the Office of Economic Opportunity. Qualitative evaluations
        were obtained for reading, mathematics, classroom behavior, science,
        creative dramatics, and use of the language master through a
        curriculum index questionnaire, examination of teachers' daily logs,
        and interviews with administrators, supervisors, teachers, parents,
        and observers. Subjects were culturally deprived children attending
        prekindergarten through grade 3. Conclusions were as follows: (1)
        ongoing inservice training is necessary, (2) purposes and limita-
        tions of the program must be continuously articulated, (3) educators
        should be reoriented to innovative teaching methods, and (4) parental
        feedback on children's relative growth should be used. Quantitative
        followup psychological evaluations of experimental, filler, and
        control subjects were made. A parent program was initiated to help
        with personal and environmental problems.

488.   Speiss, Madeleine. SWCEL Reinforced Reading Readiness Program:
        The Application of Classroom Management with Reading Readiness and
        Related Entry Skills. Albuquerque, N.M.: Southwestern Cooperative
        Educational Laboratory, 1969, 23p. [ED 040 009]

        Instructional training packages for teachers of culturally divergent
        pupils were prepared and are being used with about 1,200 first
        graders in an experimental program, sponsored by the Department of
        Health, Education, and Welfare, U.S. Office of Education. Reading
        readiness skills are being taught within a classroom management
        framework of extrinsic reinforcement, followed by tapering schedules
        utilizing token reinforcement, with the goal of building and main-
        taining intrinsic contingencies for entry skill and reading readiness
        behaviors. Dependent task breakdowns were prepared for subareas
        under the following categories: associative vocabulary, sensory
        attributes, numerical concepts, matching and perceiving differences,
        listening, and aural discrimination. A greater number of lessons
        were written for associative vocabulary tasks based on evidence

that deficits attributable to culturally deprived children cluster in this factor. Each lesson package contains teacher directions, stimulus picture cards, example cards, and individual child worksheets. Sample lessons for auditory discrimination of initial consonant P, the spacial relation concepts towards and away from, and an alphabet lesson for distinguishing P, G, and Q are included.

489. Stern, Carolyn. The Effectiveness of a Standard Language Readiness Program as a Function of Teacher Differences. Los Angeles: University of California, June 1969, 17p. [ED 039 932]

In order to foster skills which would facilitate disadvantaged children's ability to learn to read, Buchanan and Sullivan developed the Readiness for Language Arts Program published by the Behavioral Research Laboratories (BRL). A pilot study was run by the Office of Economic Opportunity (1) to test the effectiveness of the BRL programed materials on Head Start children, and (2) to see if posttest differences between subject and control groups would be due to the program or to teacher differences. Seven Head Start classes were randomly designated as experimental groups and four as control groups. All subjects were pretested on the Peabody, the UCLA Language Concepts Test, and the Lee-Clark Readii·· ·· idiness Test. Also, the experimental classes were given the UCLA ual Discrimination Inventory. The seven teachers and seven teacher aides from the experimental classes were trained in use of the BRL program before they administered it to their students. The program is highly structured and took four months to carry out. The children were posttested on the UCLA Language Concepts Test and the Lee-Clark Reading Readiness Test, but no significant between-group difference was found. Teacher behaviors appeared to be related to program effectiveness.

490. Whipple, Gertrude; Black, Millard H., comps. Reading for Children Without--Our Disadvantaged Youth. Reading Aids Series, No. 3. Newark, Del.: International Reading Association, 1966, 60p. [ED 024 532. Document not available from EDRS. Available from International Reading Association ($2.00 nonmember, $1.75 member)]

Successful reading practices and programs for culturally disadvantaged children are discussed by five authorities in the field. The first section, written by Gertrude Whipple, defines the kinds of pupils considered to be culturally disadvantaged, tells why they need a special program, and outlines the type of program needed. Three sections deal with suitable classroom activities and materials for these children: the Primary section is written by Patricia Eastland, Detroit Public Schools; the Middle Grades section by Leonore Wirthlin, Cincinnati Public Schools; and the Secondary Schools section by Gertrude L. Downing, Queens College. The last section, by Millard Black and Gertrude Whipple, describes ten reading programs, some that are schoolwide and others that are school-systemwide. Some of the programs are operated by the public schools and others by private groups such as churches. References are included.

491. Wilsberg, Mary; Castiglione, Lawrence V./ The Reduction of Pupil-
      Teacher Ratios in Grades 1 and 2 and the Provision of Additional
      Materials: A Program to Strengthen Early Childhood Education
      in Poverty Area Schools. Evaluation of ESEA Title I projects in
      New York City, 1967-68. New York: Center for Urban Education,
      N.Y. Educational Research Committee, 1968, 244p. [ED 034 003]

      A project by the New York City Board of Education to reduce teacher-
      pupil ratios and to provide additional educational materials was
      a subsection of a program to strengthen early childhood education
      in New York City poverty area schools. The teacher-pupil ratio
      was reduced to the level of one to fifteen in the first grades and
      one to twenty in the second grades. Eight dollars was allotted per
      child for purchasing extra supplies, one dollar of which was desig-
      nated for the purchase of paperback books for the personal libraries
      of the children. The program was implemented in two hundred forty
      schools, on which the report focuses in regard to evaluation of
      (1) the organization for instruction and deployment of staff,
      children, and space, (2) the content and materials of the instruc-
      tional program, particularly in reading, and (3) the strengths
      and weaknesses of the program as seen by school staff and admin-
      istrators. Test results of the study, and sample questionnaire
      and interview forms are appended.

Perceptual Development

492. Abbott, John Courtney. A Study of Visual Perceptual Programming
      Administered by Mothers. Ph.D. Dissertation, The Pennsylvania
      State University, 1971, 104p. [ED 067 642. Documents not avail-
      able from EDRS. Available from University Microfilms (Order No.
      72-13, 805)]

      This study measured the effectiveness of mothers conducting a
      structured visual perception program with their children under the
      training and direction of the investigator. The subjects were
      four- and five-year-old children in an inner-city school district
      who were randomly assigned to experimental and control groups and
      tested on the Frostig Developmental Test of Visual Perception, the
      Metropolitan Readiness Test, and the Bender Visual Motor Gestalt
      Test. Results showed that the experimental group made significant
      gains on the Frostig Test in comparison to the control group, but
      not on the Metropolitan or Bender tests. This finding suggests
      that training on the Frostig program did not transfer to another
      visual perception test or to the measure of academic readiness.
      The study does conclude that parents, when trained and supervised,
      can effectively use structured training programs with their children.

493. Benenson, Thea Fuchs. The Relationship between Visual Memory for
      Designs and Early Reading Achievement. PH.D. Dissertation,
      Columbia University, 1972, 98p. [ED 065 854. Document not avail
      able from EDRS. Available from University Microfilms (Order No.
      72-19, 104)]

The main purpose of this investigation was to study the relationships between visual memory and early reading achievement. Short term and intermediate visual memory were examined in relation to vocabulary, reading comprehension, and reading readiness in first grade pupils. The Gates MacGinitie Readiness Skills Test, the Visual Memory for Designs Tests (Short Term and Intermediate), and the Gates MacGinitie Reading Tests (Primary A: Vocabulary and Comprehension) were administered as group tests throughout the school year to 192 first graders in a white, upper middle class suburban community. Positive relationships were found between the visual memory tests and the reading readiness test in beginning of year testings. When extended into a predictive format, the readiness test correlated more highly with reading achievement than did the visual memory tests. The readiness subtest most closely associated predictively with the two reading measures was auditory blending, which was the subtest least correlated with the visual memory tests. These results suggest that perhaps the auditory modality or auditory visual integration are of greater importance than visual memory when predicting reading achievement.

494. Cole, Julia M. Learning to Read--The Great Debate (Implications of the Study for Children with Learning Disabilities). Paper presented at the conference of the Association for Children with Learning Disabilities, Boston, 1968, 4p. [ED 018 333]

Some of the implications of Chall's "Learning to Read, The Great Debate" for teaching perceptually handicapped children to read are discussed. Chall contrasted the whole-word approach with the code-emphasis approach in which a child breaks the code through letter-sound associations. It has been observed that children find more difficulty in decoding the printed word than in comprehending the story, that phonics does not necessarily result in mechanical reading, and that phonetic knowledge allows the child to read independently and improves his spelling and writing abilities. Teaching perceptually handicapped children to read requires systematic phonics instruction enriched by kinesthetic training, lessons programed in small segments, and constant review and reinforcement. The code-emphasis approach offers much in this direction. Chall's book points up the need for improved reading research and for the development of diagnostic and evaluation instruments. Prevention rather than remediation is emphasized.

495. Eitmann, Twila. Readiness: Some Travel Faster than Others. A Unit on Reading Readiness. Council Bluffs, Iowa: Project Impact, June 1969, 51p. [ED 042 573]

An extended readiness unit plan for beginning first graders who demonstrated a limited degree of readiness in kindergarten is provided. The unit theme is the five senses, presented in the following sequence: sight, hearing, smell, touch, and taste. Visual-perception activities receive the most emphasis. Included in procedures for teaching each section are descriptions of individual, small-group, and large-group activities; patterns for some

materials used; and poems, film, and art activities. Recommended time limits are also included for each unit. Suggested teacher references and supplementary films are listed, and an extensive booklist for first grade independent reading, published by _Elementary English_, is appended.

496. Meyerson, Daniel W. _A Reading Readiness Training Program for Perceptually Handicapped Kindergarten Pupils of Normal Vision. Final Report_. Stanford, Calif.: Stanford University Press, May 1967, 114p. [ED 013 119]

Based on the hypothesis that Kephart Perceptual Training would sharpen visual perception in perceptually handicapped kindergartners, this program studied fifty-eight such children according to three categories: the Frostig Developmental Test of Visual Perception, socioeconomic status, and visual acuity (keenness). The children were divided into two groups: one was Kephart-trained fifteen minutes per day; the other received no special training. At the end of eight weeks, Ginn Pre-Reading and Lee-Clark Reading Readiness Tests were administered. The three categories were examined by analysis of variance. Results showed no significant differences as the result of Kephart training. The children of high socioeconomic status were better prepared for reading, regardless of training or visual adequacy. Socioeconomic factors may affect reading readiness more than do either Kephart training or visual acuity.

497. Robertson, Jean E. _Kindergarten Perception Training--Its Effect on First-Grade Reading_. 1967, 11p. [ED 012 219]

Fifteen research studies in child development are surveyed. Particular emphasis is given to Feldman who recommends a "code-first" program for beginning reading. The term "code" refers to the letter symbols representing the characteristic speech sounds of English. Some of the problems in perception, and the implications for kindergarten perception training programs are considered on the basis of this "code-first" approach. Specific suggestions for activities which would develop a child's auditory perception are described. The role of language in the development of perceptual activity is also discussed, and studies of how the child acquires syntax are reviewed.

498. Roy, Irving; Roy, Muriel L. _Effect of a Kindergarten Program of Perceptual Training upon the Later Development of Reading Skills. Final Report_. Washington, D.C.: Bureau of Research, U.S., 1968, 21p. [ED 030 491]

Fifteen children from each of three kindergarten classes were randomly chosen to participate in this study, and were randomly assigned to one of three treatment groups: (1) a group that received a perceptual training program, (2) a group that received augmented attention but no program, and (3) a control group that received no special program nor attention. The program and attention sessions occurred once a week for twenty-five minutes. The

purpose of this study was to discover if kindergarten can facilitate later reading skill development, and, specifically, if a perceptual training program increases the likelihood that children will·succeed in learning to read. All the children in the study were pretested on a perceptual motor development test, and posttested on a reading readiness test. The study ran from September, 1967, to May, 1968. Children in group one scored higher than those in group two, who, in turn, scored higher than children in the control group. These differences, however, were not significant. Also, although chronological age was not found to correlate with reading readiness scores, the scores on the perceptual motor development test did correlate with the readiness scores. No performance differences were attributed to variations in teaching style or classroom.

499.   Shinder, Lionel. The Effects of the Frostig Developmental Program of Visual Perception on Reading Readiness and Reading Achievement. Ed.D. Dissertation State University of New York at Albany, 1971, 124p. [ED 073 442. Document not available from EDRS. Available from University Microfilms (Order No. 72-31, 815, MF $4.00, Xerography $10.00)]

The purpose of this research was to determine the effectiveness of the Frostig Developmental Program of Visual Perception in effecting gains in reading readiness scores and perceptual motor ability with both kindergarten and grade 1 students. High, middle and low groups in both kindergarten and grade 1 were determined on a pretest using the Frostig Developmental Test of Visual Perception by dividing the range of scale scores into thirds. Experimental students were exposed to the Frostig Developmental Program of Visual Perception for ninety-three school days. The Frostig Developmental Test of Visual Perception and the Lee-Clark Reading Readiness Test were administered to the kindergarten students and the Frostig Developmental Test of Visual Perception and the California Achievement Test-Reading were administered to the grade 1 students. The results of the tests indicated that after treatment, each experimental subgroup was significantly different from the comparable control subgroup in perceptual motor ability. This was true for both kindergarten and grade 1 students. No significant differences were found in reading readiness or reading achievement.

Tutorial Program

500.   Infant Education Research Project, Washington, D.C.; One of a Series of Successful Compensatory Education Programs. It Works: Preschool Program in Compensatory Education. Palo Alto, Calif.: American Inst. for Research in Behavioral Sciences, 1969, 26p. [ED 027 976. HC not available from EDRS. Available from Superintendent of Documents ($0.35)]

In a study for the U.S. Office of Education to determine whether or not culturally deprived children develop at progressively greater deficits in intellectual functioning during the ages of 15 months

and three years, tutors provided 15-month-old infants with intellec-
tual and verbal stimulation one hour daily, five times a week until
they were 36 months old. The subjects consisted of Negro males
from homes that met two of the following three criteria: (1) family
income was $5,000 or less, (2) mother's formal education was less
than twelve years, and (3) mother had been an unskilled or semi-
skilled worker. The experimental group contained 28 children and
the control group numbered 20. Pretests on the Bayley Infant
scales showed the controls slightly superior (but not significantly)
to the experimentals at 14 months. At 21 months, the experimentals
had gained significantly (.05 level). Posttesting on the Stanford-
Binet at ages 27 and 36 months showed that experimentals were sig-
nificantly superior to controls at the .01 level. When the subjects
were 36 months old, the Peabody Picture Vocabulary Test and Johns
Hopkins Perceptual Test showed that the experimentals were signifi-
cantly superior at the .01 level; the Aaronson-Schaefer Preposition
Test also showed gains but not at a significant level.

501. Niedermeyer, Fred C.; Ellis, Patricia Ann. The Development of a
Tutorial Program for Kindergarten Reading Instruction. Inglewood,
Calif.: Southwest Regional Educational Laboratory, Office of
Education (Health, Education and Welfare), Washington, D.C., 1970,
40p. [ED 057 994]

The Southwest Regional Laboratory for Educational Research and
Development developed an exportable tutorial program whereby school
personnel can train older students or adult nonprofessionals to
tutor kindergarten children in reading. The initial program was
tested in a middle-income suburban district near Los Angeles. Nine
kindergarten teachers trained seventy-five fifth- and sixth-grade
tutors. The tutorial program was used in four of eight nearby
schools. In these schools, remedial instruction for low performing
students following each unit of the reading program was administered
by trained tutors and the teacher; in the other four schools the
same remedial instruction was conducted by the teacher only. Pupil
performance for both groups was compared; a tutor observation scale
was developed to observe behavioral differences between trained and
untrained tutors; and responses to a tutor questionnaire were
collected. This report presents the rationale used to formulate
the tutorial program, describes the formative evaluation procedures
used to develop the program, presents data related to the effective-
ness of the initial program, and describes the revised tutorial
program. Aspects of the development procedures which have general
applicability for the preparation of tutorial programs for similar
curriculums are also detailed. Tables, figures, and appendices are
included.

Prereading Skills

502. Bernabei, Raymond. An Evaluation of the Interim Class: An Extended
Readiness Program. Doylestown, Pa.: Bucks County Superintendent of

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Schools, 1968, 10p. [ED 028 820]

This three-year longitudinal study is exploring readiness skills of children between five and eight years of age, and proposes a design for curriculum development. In this study, generalized concepts, visual-motor triordination, visual and auditory discrimination, visual and auditory memory (imagery), and oral language usage are identified in order to categorize learning behaviors. Behavioral indicators for readiness skills are matched to skills for reading achievement, perception, recall, word analysis, comprehension, and transference. Commercial materials and specially prepared materials are developed into a conceptual design for curriculum development. A child is guided into a personalized learning program, his progress is assessed, and he is placed for the coming year according to his readiness to learn. Evaluation of the program after one year indicates significant differences in readiness skills between the interim class and normal classes.

503. Campbell, Bonnie; Quinn, Goldie. Readiness and Phonetic Analysis of Words in Grades K-2. Bellevue, Nebraska: Bellevue Public Schools, 1965, 27p. [ED 013 193]

The method used at the Bellevue (Nebraska) Public Schools to teach reading readiness and the phonetic analysis of words in kindergarten through grade 2 is described. Suggestions for teaching the readiness skills of auditory and visual perception, vocabulary skills of word recognition and word meaning, and the phonetic analysis of words in grades one and two are given. The section on phonetic analysis provides information about consonants, consonant blends, digraphs, three-letter blends, vowels, vowel variants, the Dolch Reading List, rhyming words, little words in a big word, compound words, multiple meanings of words, synonyms, antonyms, homonyms, root words, possessives, and contractions. A checklist for comprehension skills and oral reading is included.

504. Corliss, William S. How to Help Your Child Read. Unpublished manuscript. 1971, 19p. [ED 065 837]

This guide is divided into seven main sections. "How to Help Your Child Read" discusses the importance of being aware of your child, your schools, school-related factors, particular ways of helping your child in reading, and yourself. The unit, "Help Me Help My Child," discusses assignment of pupil to teacher, grouping procedures, size of groups, reading consultant, remedial reading program, summer school, summer library program, and special personnel. "Organizational Patterns" discusses the Joplin Plan, team teaching, cooperative teaching, ungraded primary and self-contained classroom grouping. The "Materials" section discusses quality of authorship and content, basic materials, and supplementary programs. "Objectives of Reading" discusses the school's responsibility regarding initial reading experiences, development of skills, and reading attitude. "Reading Comprehension" discusses the basic skills

necessary in a sound reading program, such as phonics, visual and auditory discrimination, and vocabulary.

505. Goolsby, Thomas M., Jr. Evaluation of Cognitive Development: An Observational Technique--Prereading Skills. Athens, Ga.: University of Georgia Research and Development Center in Educational Stimulation, March 1969, 28p. [ED 047 017. HC not available from EDRS. Available from Thomas M. Goolsby, Jr., University of Georgia]

A method of evaluation of prereading skills in preprimary school children is described. The method, employing a checklist, can provide either a record of class performance or a cognitive profile of an individual student. The instrument is divided into eight major task areas that may be seen as plateaus of cognitive development of prereading skills. It includes such activities as following directions, dramatizing, being read to, bookhandling, relating persons and names, word-related visual and auditory discrimination, and attempts to read. In using the checklist, the teacher records the date when observation of a positive demonstration of a particular activity took place. A comprehensive record of sequential growth in the eight skill areas is thus compiled. A copy of the checklist, a description of each of the eight cognitive activities, symptoms of each of the activities, and guides for discerning them are included.

506. Gotkin, Lassar G.; McSweeney, Joseph. The Development of a Beginning Reading Skills Program Using the Edison Responsive Environments Instrument. Fourth Progress Report. New York: New York University, School of Education, 1967, 65p. [ED 015 842]

A fourth progress report on the development of a beginning reading skills program using the Edison Responsive Environments Instrument is presented. The acquisition of a sequence of complex beginning reading skills is examined. Motivational strategies are discussed. The following hypotheses were tested in field studies: (1) the effects of two types of feedback on the acquisition of sound symbol correspondence, and (2) the effect of motivation contexts on attention in younger learners. Tables and figures are included.

507. Hall, Vernon C. Language Intervention and Evaluation Project. Syracuse: National Laboratory of Early Childhood Education, 1969, 15p. [ED 076 930]

This project was designed to test the effects of a language curriculum based on skills needed to learn the letters of the alphabet, to develop and test methods of assessing a language program, and to look at the training effects across differing subject populations. Subjects included boys (half of whom were black) who were from two integrated schools and who knew less than half of the letters of the alphabet. Different teaching strategies were used to teach the alphabet--a modified Bereiter technique, spending four to six minutes with each individual, rotating teachers, and the use of personal student notebooks. Subjects were given two tests: the

Matching Familiar Figures Test (MFF) to identify subjects with varying conceptual tempos, and the Ambiguous Figure Test to look at the ability of the subjects to communicate with one another. Results indicated that the experimental subjects learned more letters than the control group and that black subjects did significantly better than white subjects. No significant correlations were found on the MFF, indicating that it might have been inappropriate for the subjects. The most interesting discovery was the fact that there was a large variation in the knowledge of the alphabet without teacher awareness and that many of the middle-class children knew the alphabet.

508. Harckham, Laura D.; Hagen, Lois V. The Effects of a Phonics-Oriented Kindergarten Program on Auditory Discrimination and Reading Readiness. Paper presented at the Conference of the American Educational Research Association, Minneapolis, Minn., March 2-6, 1970, 7p. [ED 040 834]

A three-year study concerning teaching a phonics-oriented kindergarten readiness program of letter recognition and beginning consonant sounds was discussed. Sixty-eight children attending kindergarten in a suburban middle and upper-middle class community composed the sample. The experimental group consisted of thirty-three children; the control group consisted of thirty-five. Groups were considered equivalent through random assignment to kindergarten classes. All children included were considered to have normal hearing as measured by recent school examinations for hearing acuity. After a ten-week instructional period in phonics-oriented material for the experimental group and a similar nonphonics-oriented instructional period for the control group, the Wepman Auditory Discrimination Test and the New York State Readiness Test were administered. The significantly higher scores on the NYS Readiness Test supported the hypothesis that the phonics program would enhance the readiness of the children. However, the hypothesis that kindergarten children who received phonics training as part of the readiness program would show significantly higher scores in auditory discrimination than children who did not, was not only rejected, but also yielded results to the contrary. Further research in this area was recommended. References are included.

509. Heilman, Arthur W. Developing Word Analysis Skills. Paper presented at the Annual Meeting of the International Reading Association, Detroit, May 10-13, 1972, 7p. [ED 063 579]

The importance of word analysis skills to reading ability is discussed, and methodologies for teaching such skills are examined. It is stated that a child cannot become proficient in reading if he does not master the skill of associating printed letter symbols with the sounds they represent. Instructional procedures which augment the alphabet with letters and involve respelling of words are, it is suggested, confusing, and the claims of proponents of this methodology are contradictory. Another instructional approach creates dependency on charts for translations of letter to color to

sound. A linguistic method rests on the assumption that a child should learn initially only those words which have regular spellings, thus neglecting 61 percent of five thousand basic vocabulary words with irregular spellings. Programed reading materials have the advantage of allowing students to work at their own pace, but are lacking an emphasis on reading as a meaning-making activity. Over-emphasis on word analysis skills can lead the student to resist reading for meaning or enjoyment. It is concluded that word analysis skills are necessary to reading ability and should therefore be taught systematically, but that reading for meaning and enjoyment should be given equal emphasis.

510. Jansky, Jeanette Jefferson. The Contribution of Certain Kindergarten Abilities to Second Grade Reading and Spelling Achievement. Ph.D. Dissertation, Columbia University, 1970, 131p. [ED 056 035. Document not available from EDRS. Available from University Microfilms (Order No. 71-614; MF $4.00, Xerography $10.00)]

The purpose of the present research was to investigate the contribution of independent kindergarten abilities to reading and spelling achievement at the end of the second grade. The subjects were 401 urban school children, to whom forty-two tests were administered, twenty kindergarten and twenty-two second grade. Data for both grade levels were subjected to factor analysis separately and in combination to determine what underlying competencies were represented by the tests, and to learn which kindergarten and second grade measures would appear in the same factors. Of the kindergarten abilities, oral language A tended to be most closely related to the greatest number of reading, spelling, and other language arts activities. Pattern matching and visuo-motor organization also contributed to reading and spelling achievement. The finding that reading is related to several independent kindergarten abilities has implications for intervention.

511. Keislar, Evan R.; and others. An Intercultural Study of the Development of a Reading Readiness Skill. Los Angeles: University of California Early Childhood Research Center, 1971, 20p. [ED 063 976]

This study sponsored by the Office of Economic Opportunity asked the following question: How soon does a child learn to discriminate orthographic units in his written language as distinguished from a general form--discrimination ability? A discrimination test of letters, words, or characters, in three written languages (Chinese, Hindi, and English) at three age levels, from four to five-and-a-half years was given to 153 middle class children from three different countries, Formosa, India, and the United States. The predicted interaction between nationality and language subtests was significant only at the oldest level, from five to five-and-a-half years. At this age, children in each country performed relatively better on the subtest in their native language then they did in the other two languages. No sex differences were obtained.

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512. Obrecht, Donna. The Motor Facilitation Program of School District 21, Wheeling, Illinois. Arlington Heights, Ill.: Elk Grove Training and Development Center and Wheeling Community Consolidated School District 21, 1969, 398p. [ED 036 813]

When selected as a model program the main objective of the kindergarten Motor Facilitation Program (MFP) was to prepare a child in readiness skills which would make possible easier achievement in reading at the first grade level. The purpose of the additional-help phase of the MFP was to help children in grades one through six who continue to display poor perceptual-motor abilities, or who display learning problems physically and academically. A junior high program for twenty-four students considered low achievers consisted of a sequence of motor skills used in combination with the language arts program. Indications are that there was more growth shown by the experimental group above the natural maturation development as shown by the control group. Test results for those in the additional help program were shown. In the junior experimental group, seven out of nine students improved their reading level, while only two in the control group improved their reading level. The research reported herein was founded under Title III of the Elementary and Secondary Education Act, and sponsored by the U.S. Office of Education.

513. Stanchfield, Jo M. Success in First-Grade Reading. Paper presented at the Annual Meeting of the International Reading Association, Detroit, May 10-13, 1972, 7p. [ED 063 600]

A study conducted with seventeen experimental and seventeen control kindergarten classes of Mexican-American, Black and other White children of varied academic achievement and socioeconomic background attempted to determine whether training in prereading skills would improve test scores in beginning reading. While children in the control groups experienced the regular kindergarten curriculum, experimental groups followed a course of study designed in a sequential, developmental order to teach the following skills: (1) listening for comprehension of content, (2) listening for auditory discrimination, (3) visual discrimination skills, (4) oral language skills, (5) motor-perceptual skills, and (6) sound-symbol correspondence skills. Materials used in the experimental course included de. 'led teacher reading readiness manuals; picture cards, flannelboard hand puppets, and specially selected children's books. Test: dministered at the end of the kindergarten school year, and aga_n after a year of a regular first grade curriculum, discovered a significant improvement for all experimental groups over all control groups io reading ability, with differentiated scores for different ethnic groups, but undifferentiated scores for boys and girls in the experimental groups. Statistical tables of test scores are included.

514. Stern, Carolyn; Frith, Sandra. Classroom Language of Teachers of Young Children. Los Angeles: University of California, 1970, 45p. [ED 053 820]

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The purpose of this study sponsored by the U.S. Office of Education and the Office of Economic Opportunity was to determine if (1) kindergarten reading readiness can be enhanced by differentiated instruction in visuo-motor (V-M) skills, (2) the Gesell Developmental Placement Examination (GDPE) is effective for inter-class grouping, and (3) developmental growth can be accelerated with differentiated instruction in V-M skills. Materials and media appropriate for kindergarten instruction were also to be identified. Subjects were randomly assigned by GDPE scores to experimental and control high, low, and heterogeneous development classes. After eight months, the GDPE posttest and the Gates-MacGinitie Readiness Skills Test were administered. Results revealed that (1) differentiated V-M instruction does not significantly enhance kindergarten reading readiness; (2) there are no educational advantages in inner-city grouping on basis of developmental age; (3) developmental growth is not accelerated by a program in V-M skills; and (4) slide-tape self-instructional packages and language masters are useful media for kindergarten instruction. Appendixes comprise more than one-half of the document.

515. Wylie, Richard E. Associated Factors of Word Element Perception as They Relate to Success in Beginning Reading. Paper presented at the Annual Meeting of the Reading Association, Kansas City, April 30-May 3, 1969, 8p. [ED 033 004]

Three hundred children from two metropolitan areas were studied for one year to determine (1) the relationship between letter-name knowledge and reading success, (2) the relationship between letter-name learning and phonic learning, and (3) the ease and efficiency of vowel identification. The study concluded that the sooner a child learns the letter names the greater his achievement in reading. Letter-name knowledge carries over to the learning of letter sounds, and short vowels in isolation are 1.7 times harder to identify than short vowels in phonograms. Implications of the study are discussed. The learning of letter names is seen as the background for phonics, and as an important element in the accurate perception of word structure, and the building of a large sight vocabulary. Systematic learning of phoneme identification in spoken words is viewed as essential to successful learning in beginning reading.

Early Experience

516. Aaron, Robert L. Early Childhood Education. Paper presented at the Annual Meeting of the International Reading Association, Boston, April 24-27, 1968, 30p. [ED 026 198]

The Research and Development Center of the University of Georgia investigated the behavioral differences among advantaged and disadvantaged preschool children as part of an attempt to develop the most efficient way of assuring success at the first-grade level.

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A comparative study of a preschool stimulation program and the traditional kindergarten program was made. The socioeconomic status of the subjects was considered. While other studies on preschool children conducted at the Research and Development Center are cited, only the tabulated results for a selected sample are presented and discussed. The stimulated preschool program was superior to the advantaged group of the traditional kindergarten program in auditory memory, book-related behaviors, letter and word reading, and writing behaviors. This paper reviews earlier studies on early reading and preschool programs and includes twenty-five references and a chart summarizing selected experimental preschool programs and their results.

517. Blanton, William E. Preschool Reading Instruction: A Literature Search, Evaluation, and Interpretation. Final Report. Vol. 1. Bloomington, Ind.: Indiana University, 1972, 160p. [ED 069 345]

This report sponsored by the National Center for Educational Communication presents three interpretive manuscripts on preschool reading instruction for three audiences: the school administrator, the school teacher, and the parent. "Preschool Reading Instruction: Information for the Administrator" discusses the origins of preschool reading instruction, reviews the research dealing with preschool reading instruction, and presents information necessary for installing a preschool reading program. Similarly, "Preschool Reading Instruction: Information for the Teacher" presents a review of the literature on preschool reading instruction, along with suggestions and materials for teaching preschool reading. "Preschool Reading Instruction: Information for the Parent" provides answers to questions parents ask about preschool reading instruction and suggests guidelines parents might follow in helping the preschool child before he learns to read.

518. Blanton, William E. Preschool Reading Instruction: A Literature Search, Evaluation, and Interpretation. Final Report. Vol. II. Bloomington, Ind.: Indiana University, 1972, 240p. [ED 069 346]

This National Center for Educational Communication report, Volume II of three interpretive manuscripts, presents information for the teacher, a review of literature on preschool reading instruction, along with suggestions and materials for teaching preschool reading. A skills checklist is provided and the educational television program, "Sesame Street," is evaluated, since the effectiveness of this medium has been both praised and questioned. Reading readiness and motivation are discussed. The latter portion of this report offers three appendices; Appendix A is a Guide to Materials for Prereading Instruction, Appendix B lists Publishers of Reading Materials, and Appendix C is a Reference List of Books for Preschool Children.

519. Blanton, William E. Preschool Reading Instruction: A Literature Search, Evaluation, and Interpretation. Final Report. Vol. III. Bloomington, Ind.: Indiana University, 1972, 64p. [ED 069 347]

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This National Center for Education Communication report answers
questions that parents are likely to ask about preschool reading
instruction. It discusses the origins, curriculum change, new
concepts of intelligence, and the various teaching methods such as
Montessori and the British Infant School. Unlike previous genera-
tions, today's child is exposed to visual and auditory stimulation,
and to forces converging simultaneously on the preschool curriculum.
Events in technology and social and political changes have exerted
tremendous influence on revamping preschool educational programs.
A checklist to determine whether or not the home provides for the
development of early reading is offered, along with a Selected
Book List for children of various ages. The need for emotional
development and language skills is reviewed, as well as good
experiential backgrounds on which to base language and an interest
in reading. Although the learning of reading is highly individual-
ized, it appears that preschool children can learn to read earlier.
The parent is warned, however, that worry about child's inability
to learn to read may handicap a child, and in that case instruction
is best left to the school. Trust, encouragement, and interest are
suggested.

520. Cunningham, Grover; Pierce-Jones, John. A Pilot Project Using a
Language Development Program with Preschool Disadvantaged Children.
Part of the Final Report on Head Start Evaluation and Research:
1968-69 to the Office of Economic Opportunity. Austin: University
of Texas Child Evaluation and Research Center, 1969, 13p. [ED 037
245]

A three-month pilot project was undertaken at the University of
Texas under the sponsorship of the Office of Economic Opportunity,
to gain experience in administering the Cynthia Buchanan Language
Program (Buchanan, 1967) and to test its effectiveness in making
meaningful changes in the language development of disadvantaged
Mexican-American preschoolers. A group of 114 Mexican-American
children were chosen as experimental subjects who would receive
instruction from the Buchanan Program, while another group of 101
subjects served as the control. It was hypothesized that while
both groups would make significant gains in language development,
the rate of gain of the experimental group would be significantly
greater than that of the control group. Both groups were pretested
and posttested with the Metropolitan Readiness Test, the Murphy-
Durrell Reading Readiness Analysis, the Gates Reading Readiness
Test, and the Lee-Clark Reading Readiness Test. The results solidly
supported the hypothesis. Next, an analysis of covariance was run
on the data to determine whether or not the results were generalized
to all levels of beginning scores. The results of the analysis
indicated that they were not generalizable.

521. Goolsby, Thomas M., Jr.; Frary, Robert. Development and Use of
"Evaluation of Cognitive Development--Prereading Skills". 8p.
[ED 046 991]

This document discusses the methods and validity of evaluations of cognitive development, in language and numbers, of children ages three through six, by use of classroom observation inventory lists. The "Evaluation of Cognitive Development--Prereading Skills, an observational instrument (Teacher Completed)," was administered to 134 first grade students in a Gulfport (Mississippi) project in order to determine the presence of sixty-four behaviors regarded as significant in evaluating prereading skills. Thirty-two behaviors were exhibited by all or nearly all of the students. A factor analysis of the remaining thirty-two variables yielded eleven that were strongly associated with achievement and readiness. These variables were placed into two general categories: behavior associated with interaction with other children, and behavior related to phonic discrimination. Thus, the results indicate that certain social behaviors and behav' rs reflecting phonics ability were clearly related to reading readiness and achievement even late in the first grade. Whether this behavior pattern is applicable to the population of other grade and age levels is yet to be determined. A longitudinal study, as well as additional performance validity of the eleven variables, in the age group three to six, is recommended.

522. Henderson, Edmund H.; Long, Barbara H. Some Correlates of Reading Readiness among Children in Varying Backgrounds. 9p. [ED 023 535]

The relationships between noncognitive factors and reading readiness in elementary school children were studied. One hundred ninety-two entering first graders (half black, half white; half boys, half girls) were selected in two rural Southern counties at the initial stages of a desegregation program. The socioeconomic level of the groups was controlled so that half of each group belonged in grades six and seven, and half belonged in grades one through five. The Metropolitan Readiness Test and the Children's Self-Social Constructs Test (preschool form) were given within the first few weeks of school. After six weeks, teachers were asked to rate all subjects on twenty-four bipolar dimensions of classroom behavior, including whether or not the child intercorrelational analysis based on the total sample indicated a high relationship between readiness and eight of the seventeen variables. Among the eight, preschool education, teachers' ratings, and age, were the best predictors. Among the other significant relationships were distance from teacher, realism for size, and preference for Mother. The data seem to indicate that meaningful social experience is as important as training in decoding skills for reading readiness. References are given.

523. Hess, Robert D. Maternal Behavior and the Development of Reading Readiness in Urban Negro Children. Chicago: University of Chicago Early Education Research Center, 1969, 28p. [ED 031 309]

In this paper, sponsored by the U.S. Office of Education, the effects of environmental influences upon the development of reading readiness in young children were discussed. It was assumed that the effects of social, cultural, and economic factors on a preschool

child are mediated in a large part through adults closely involved
with the child's life. One hundred sixty black mothers and their
four-year-old children, representing four social status levels,
were selected as subjects. Observations of the subjects and ques-
tionnaire data showed that maternal behavior and physical environ-
ment do influence the child's early cognitive and academic develop-
ment. Children were affected by (1) degree of crowding in the
living quarters, (2) use of home resources by the mother to aid the
child's cognitive growth, (3) amount of time a mother reads to a
child, (4) the mother's participation in outside activities, (5)
the mother's feelings of effectiveness in dealing with life, (6)
regulation of behavior strategies used by the mother, (7) maternal
teaching style when attempting to show the child how to do some-
thing, (8) the mother's affective behavior, and (9) to some extent,
the mother's own language facility. To the extent that these
factors affect the child's cognitive development, they appear to
include the motivational and other abilities involved in learning
to read.

524. Johnson, Ronald J. The Effect of Training in Letter Names on
Success in Beginning Reading for Children of Differing Abilities.
Paper presented at the conference of the American Educational
Research Association, Minneapolis, Minn., March 2-6, 1970, 10p.
[ED 038 263]

The purpose of this investigation was to determine the effect on
first-grade reading achievement of completing a program designed
to teach the names of the letters of the alphabet before beginning
formal reading instruction. Information was sought on the differen-
tial effect of this program on either boys or girls of different
levels of intelligence, initial letter-name knowledge, and reading
readiness. In addition, information was sought on the degree of
relationship among the variables measured in the investigation.
Selected for the sample were 424 first graders in twenty-four
classrooms. Twelve of the classrooms were assigned to control
treatment, a program which stressed listening activities. The
other twelve classrooms were split between two experimental treat-
ments using two published programs selected as being representative
of two prevailing approaches to teaching letter names. Instruction
in letter names resulted in superior letter-name knowledge for the
experimental groups, but not in greater vocabulary or comprehension
reading achievement than that exhibited by the control groups. No
significant differences were found between the achievement of boys
and girls. References are included.

525. Mathews, Virginia H., ed. Parents and Beginning Readers. Washing-
ton, D.C.: National Reading Center Foundation, Office of Education
(DHEW), 1972, 34p. [ED 064 705. Also available from Superintendent
of Documents, U.S. Government Printing Office (series of 12
pamphlets, total price $1.65)]

This series of twelve articles for parents on how to help pre-
schoolers and beginning readers at home was written for the National

Reading Center by specialists in reading and early childhood educa-tion. The titles and authors are "Getting Ready to Read" (E. Robert La Crosse), "Creating A Good Reading Climate at Home" (Mary Frances K. Johnson), "Reading Games to Play at Home" (Nancy Larrick), "Kindergarten--An Important Pre-Reading Step" (Lucile Lindberg), "Reading and Language Development in First Grade" (Celestia Davis), "Reading Readiness--What Parents Should Know about It" (Marjorie S. Johnson), "A Primer for Parents on Reading Methods" (Dorothy M. Dietrich), "Adults as Reading Models for Children" (Virginia H. Mathews), "Vision, Hearing, Coordination and Health in Reading" (Marie S. Crissey), "Reducing Pressures in Learning to Read" (Grayce A. Ransom), "Getting Help on Reading Outside of School" (Virginia H. Mathews), "What Can Communities Do to Improve Reading Programs" (D. Philip Baker).

526. <u>Nursery School Project</u>. Gothenburg School of Education (Sweden). May 1971, 31p. [ED 057 908]

The original objective of the nursery school was that acting in cooperation with the home, it should develop children motorically, intellectually, emotionally, and socially. A comparison of objec-tives with effects reveals many to be nonexistent. A 1966 study of nursery school effects on child development revealed the following breakdown: (1) favorable effects in the areas of general knowledge vocabulary, capacity for linguistic expression, and ability to manage certain daily routines without assistance, and (2) absence of results with respect to motorical, social, and emotional adjustment, marks scored in the test of readiness for school attendance, and performance in reading, writing, and arith-metic during the first three years' attendance at school. The project reported on in this paper concerns the use of new tech-niques of learning in nursery school methodology. The fields of social training, training in communications, and training in comprehension were the fields tested. The program is currently being implemented with the aid of control group procedures. All of the children are tested at the beginning and end of the school year with the following instruments: Readiness for School Atten-dance; Sound Analysis Test, Vocabulary Test, Attitude Test, General Knowledge Test, and Observations of Standardized Play Situations. The methods used in the experimental groups are validated with the assistance of observations in accordance with a variant of flanders. Appendices 1, 2, and 3 contain the various project aims; appendices 4 through 7 contain instruction for teachers.

527. Smith, Carl B., comp. <u>Parents and Reading Perspectives in Reading No. 14</u>. Newark, Del.: International Reading Association: Chicago, Ill.: National Congress of Parents and Teachers, 1971, 117p. [ED 070 047. Also available from International Reading Association ($3.50 nonmember, $3.00 member)]

Chapters in this book describe how the home and the general envi-ronment contribute language and concepts, and thereby condition a child to react favorably or unfavorably toward school and reading.

The causes of reading difficulties are discussed to show that physical and psychological as well as social and instructional interferences may be involved. Interest and motivation play key roles in the energy a child brings to reading and thus should be searched out by the parent and the teacher to take best advantage of the kinds of books that will appeal to the existing drives of the child. The book also treats the very practical concerns of the parents' role--how early reading instruction should begin, successful methods some parents have used to teach children to read, facts about decoding, facts about comprehension, and ways that parents can help with reading instruction in school, through the PTA, or on their own. The articles also suggest ways in which teachers and administrators can encourage parents to participate in helping their children learn to read.

528. Torrance, E. Paul. A Three-Year Study of the Influence of a Creative-Aesthetic Approach to School Readiness and Beginning Reading and Arithmetic on Creative Development. Athens: University of Georgia Research and Development Center in Educational Stimulation, September 1969, 20p. [ED 041 419]

A creative-aesthetic approach to school readiness and beginning reading and arithmetic, as formulated by Fortson, was used with twenty-four kindergarten children. Two control groups included thirty-nine children. Two replications of the study were made, each having two experimental groups. Experimentals scored significantly higher on tests of creative thinking, problem solving, and originality. Fluency, flexibility, and originality were consistently high, around the fifth grade levels, in the study and its replications; elaboration fluctuated somewhat. This study was sponsored by the Cooperative Research Program of the U.S. Office of Education.

529. Rogers, Norma. What Is Reading Readiness? Bloomington Indiana University. ERIC Clearinghouse on Reading. Newark, Del.: International Reading Association, 1971, 16p. [ED 057 987. Also available from International Reading Association ($0.50 nonmember, $0.35 member)]

This micromongraph, concerned with beginning reading readiness, is one of a series designed to answer for parents questions about their children's reading development. The development of the concept of reading readiness is briefly discussed, and four major factors involved in reading readiness are identified: mental factors, physical factors, emotional and social factors, and educational factors. It is recommended that parents and teachers be alert to the possibility of learning disability due to any of the above factors, and that they should consult the specialist if such disability occurs. The importance of hearing, vision, speech, and motor control is emphasized, and their interrelationships and influence on reading readiness are pointed out. Other important factors for reading success mentioned are age, sex, interest, desire to read, and the child's general pattern of growth and development. The author also discusses how the teacher may assess

a child's reading readiness and urges the parents to discuss frequently their child's progress with the teacher so they might understand the purpose of the type of instruction prescribed for their children. References and questions for discussion are included.

Predictive Measurement

530. Barr, Rebecca C. Development of a Word Learning Task to Predict Success and Identify Methods by which Kindergarten Children Learn to Read. Final Report. Chicago: University of Chicago, February 1971, 100p. [ED 063 047]

The objectives of this study sponsored by the Bureau of Research of the U.S. Office of Education, were (1) to construct and evaluate the reliability and validity of word learning tasks for predicting success in learning to read, and (2) to compare the effectiveness of word learning tasks with readiness measures in predicting reading in grade one. Two samples of like-aged boys and girls from urban (76) and suburban areas (105) were selected for the study; one sample was tested with the word learning tasks in May of the kindergarten year, and the other in September in first grade. Word learning and reading samples were collected in December and May of first grade for all subjects. Mills' Learning Methods Test Scores and readiness information (test scores and teacher ratings) were collected for selected subjects. The combined tasks were found to be reliable measures, with a moderate degree of validity. A comparison of the tasks, words learned-December, kindergarten teacher ratings, and the Metropolitan Readiness Tests showed that the Metropolitan Readiness Tests were generally the best predictor of reading in May of first grade; the word learning tasks were less effective predictors, and the kindergarten teacher rating was the least effective. Words learned-December was the most useful measure in identification of children with low reading skill at the end of the first grade.

531. Blackman, Charles, comp. Reading Readiness, Achievement and Diagnostic Tests. Jefferson City: Missouri State Department of Education, 1968, 19p. [ED 024 544]

This list of tests was compiled as a reference for those persons responsible for the planning of testing programs or evaluation. Although it is not intended to be all-inclusive, twelve reading readiness, fifteen reading achievement, nine diagnostic, and ten achievement batteries are described. Two programs of supplementary materials are mentioned. Information on publisher, grade, scores, provided, subtests, and time is given. It is suggested that this list be used initially to determine several tests, and that specimen sets of these be secured for examination before a final selection is made.

532. Dykstra, Robert. _Relationships Between Readiness Characteristics and Primary Grade Reading Achievement in Four Types of Reading Programs._ Paper presented at the Conference of the American Educational Research Association, Minneapolis, Minn., March 2-6, 1970, 10p. [ED 039 103]

The relationships between prereading measures of auditory discrimination, letter knowledge, and intelligence and reading ability were investigated for pupils who completed grades 1 and 2 in four different types of instructional programs--conventional basal reading programs, i.t.a. programs, language-experience approaches, and code-emphasis programs. The 7,240 first-grade pupils and 3,036 second-grade pupils who comprised the sample for this study were participants in the cooperative research program in first-grade reading instruction. Pre-grade-1 measures were the Murphy-Durrell Phonemes Test, the Murphy-Durrell Letter Names Test, and the Pintner-Cunningham Primary Intelligence Test. The Paragraph Meaning and Word Reading Subtests of the Stanford Achievement Battery were administered at the end of grades 1 and 2. In a majority of cases, significant differences were found among correlation coefficients representing predictive relationships for pupils enrolled in code-emphasis and i.t.a. programs than for pupils in basal and language-experience programs. Tables are included.

533. Green, Margaret E. _Pre-school Kindergarten Readiness Inventory._ Paper presented at the convention of the Personnel and Guidance Association at Las Vegas, Nev., March 30-April 3, 1969, 9p. [ED 032 599]

The Pre-school Kindergarten Readiness Inventory (PKRI) is a brief diagnostic instrument designed to be administered by the classroom teacher. It can be administered and scored in 10 to 12 minutes. The PKRI was developed to measure abilities and skills that are regarded as necessary for success in school, including social awareness, motor performance, and letter recognition. The most important goal was to help the teacher to become "tuned in" emotionally with the child. The results may be used to identify children who appear to need (1) vocabulary development, (2) further diagnostic work, and (3) more work in perceptual activities. The construction of the PKRI involved item analysis based on 1,926 kindergarten pupils. The PKRI was administered for standardization purposes to approximately 2,000 children in May, 1969. More research on the PKRI Measure in relation to reading success should be carried out.

534. Henderson, Edmund H.; Long, Barbara H. _Predictors of Success in Beginning Reading Among Negroes and Whites._ Paper presented at the Annual Meeting of the International Reading Association, Kansas City, Mo., April 30-May 3, 1969, 10p. [ED 032 193]

Predictors of reading success for 188 black and white upper- and lower-class children in eight schools of two adjoining Southern rural counties were determined. The Child n's Self-Social

Constructs Test provided measures of such areas as self-esteem, social dependency, and minority identification. Teachers rated each child on twenty-four kinds of behavior, and the Metropolitan Readiness Test, the Otis Quick-Scoring Mental Ability Tests, and the Metropolitan Reading Test were administered. Black and white children differed significantly in all measures of achievement and intelligence. Significantly more white children were promoted to grade 2, and among those promoted, white children were significantly higher on total reading and IQ. When IQ was statistically controlled, black and white children differed significantly in reading. For white children, teacher rating, readiness, and IQ were about equally good predictors of total reading achievement. For black boys, teacher ratings were the best predictors of reading success; IQ as a predictor was considerably lower. For black boys and girls, low negative relations were found between achievement and both readiness and kindergarten attendance. References are included.

535. Hirst, Wilma E.; and others. Identification in the Kindergarten of Factors that Make for Future Success in Reading and Identification and Diagnosis in the Kindergarten of Potential Reading Disability Cases. Final Report. Cheyenne: Wyoming State Dept. of Education, February 28, 1969, 108p. [ED 029 710]

In a three-year longitudinal study sponsored by the Bureau of Research of the U.S. Office of Education, approximately three hundred kindergarten children were selected for testing in the kindergarten and first and second grades to determine predictor variables of future success in reading and arithmetic. Results of the research tended to indicate that age and intelligence test scores were not good predictors of first and second grade reading achievement. It was concluded that the most significant predictors found were as follows: (1) the Numbers Subtest of the Metropolitan Readiness Test, (2) the Digit Span of the Wechsler Intelligence Scale for Children, (3) the Visual 3 and Complete-A-Man of the Gesell Development Test, (4) titles from the Minnesota Nonverbal Test of Creativity, (5) sex (for first grade reading success), (6) socioeconomic status (for second grade reading and arithmetic achievement), (7) education of the mother, (8) kindergarten teacher's prediction of the subject's reading ability, (9) kindergarten teacher's rating of the pupil's socioemotional growth, and (10) sociometric evaluation of the number of times the child is seen in a positive role. Tabulated data and a bibliography with seventy-nine references are appended.

536. Johnson, Clifford I. Predictive Validity of Selective Reading Readiness Factors. Paper presented at the Annual Meeting of the International Reading Association, Kansas City, Mo., April 30-May 3, 1969, 8p. [ED 032 195]

To predict success in reading achievement, 148 first graders from three schools representing a cross section of the economic structure of a Southeastern U.S. community were administered, in September,

the following tests: the Frostig Developmental Test of Visual Perception, the Gates Reading Readiness Test, the Metropolitan Readiness Test, and the Olson Reading Readiness Test. The Wechsler Intelligence Scale for children was administered in December, and the Stanford Achievement Test, Primary I Battery, in May. In May of the subjects' third-grade year, the Stanford Word Reading and the Stanford Paragraph Meaning Subtests were given. For first grade the best predictor of both word meaning and paragraph meaning was the Olson Reading Readiness Test. A combination of the Metropolitan Readiness Test and the Wechsler Intelligence Scale for children was the best predictor for third-grade reading achievement. It was concluded the intellectual functioning instead of specific skill ability would be the most important information that the classroom teacher would need to know in order to predict later reading achievement. References are included.

537. Kresh, Esther; Green, Bert F., Jr. Preschool Academic Skills Test. Paper presented at the Meeting of the American Educational Research Association, Los Angeles, February 5-8, 1968, 14p. [ED 028 045]

The Preschool Academic Skills Test was developed from an analysis of first-grade reading and mathematics materials to identify those behaviors that were assumed to be in students' repertoires prior to first grade. The 105 items are grouped in ten subtests: Vocabulary, Color Naming, Classification, Functional Relationships, Visual Matching, Auditory Matching, Picture Arrangement, Symbol Series, Counting, and Verbal Concepts. The test was administered to 428 four year-olds from impoverished neighborhoods, to 326 middle-class four year-olds from private nursery schools, and to 120 five year-olds. Statistical analysis of the subtests showed the reliability of the total test score and the subtest scores to be very high. The compared test performances indicated that nondeprived children did better than deprived children, that kindergarten children did better than preschool children, and that girls did better than boys. Subtest intercorrelations were obtained for each of the subgroups. To determine the predictive validity, correlations were made among test results on this instrument given at the beginning of kindergarten, the Metropolitan Readiness Test given at the beginning of first grade, and the Metropolitan Achievement Test at the end of first grade. Tables are included.

538. Lowel, Robert C. Selected Reading Readiness Tests as Predictors of Success in Reading. Orono: University of Maine, 1967, 36p. [ED 015 118]

Four null hypotheses were tested to evaluate selected reading readiness tests as predictors of first-grade reading achievement. Five schools in the Bangor, Maine, city school system were randomly chosen. In each school, one class used the experimental program which emphasized supplementary vocabulary instruction with readiness training. Another class used the conventional program without vocabulary instruction. Both programs were based on the Harper-Row Basal Readers. Reading readiness was determined by the selected

reading readiness tests during the second week of the school year. Reading achievement was tested by individual word recognition tests based on the vocabulary of the four preprimers used, and by Spache's Diagnostic Reading Scales. Results statistically analyzed at the University of Maine Computing Center indicated that prediction of success in first-grade reading was significantly improved by using composite subtests, by clearly defining the achievement criteria, and by organizing and controlling instructional variables. Nine subtests were identified, and it was found that intact tests did not really measure features of readiness. An extensive bibliography and tabulated test results are included in this final report of a study done under contract with the Department of Health, Education and Welfare.

539. Milchus, Norman J. A Study of the Effects of First Grade Prescriptive Teaching Based on Weaknesses Diagnosed by Kindergarten Prereading Test. Final Report. Wayne County Intermediate School District, Detroit, Mich.: 1971, 117p. [ED 062 106]

The Wayne County Pre-Reading Program for Preventing Reading Failure is an individually, diagnostically prescribed, perceptual-cognitivelinguistic development program sponsored by the Bureau of Research of the U.S. Office of Education. The program utilizes the largest compilation of prescriptively coded, reading readiness material to be assigned prior to and concurrent with first-year reading instruction. The Wayne County Pre-Reading Test's eight subtests determined the assignment of appropriate materials, lessons, and games. The deHirsch Predictive Index, on which the Pre-Reading Test was patterned, was also given. The first graders in three experimental and three matched control schools were sampled and compared on reading achievement at the end of the first grade with standardized reading tests. Factor analysis was used to reduce the number of teacher and classroom variables. The hypothesis that the Wayne County Pre-Reading Program would increase reading achievement at the end of the first grade was confirmed. The Wayne County Pre-Reading Test with the Self-Concept and Motivation Inventory (SCAMIN) exceeded the predictability of the deHirsch Predictive Index. All of the subtests of the Pre-Reading Test were significant contributors to the regression equations except Categories. Word Recognition I and II, Word Matching, Word Reproduction, and Reversals were the highest and most consistent predictors along with Achievement from SCAMIN. Tables of data, sample tests, and references are included.

540. Spache, George D.; and others. A Study of a Longitudinal First Grade Reading Readiness Program. Tallahassee: Florida State Department of Education, 1965, 356p. [ED 003 355]

This project analyzed a longitudinal reading program for ide ..lica-tion of growth in abilities, and the relationship between tests. Approximately sixty pupils from control and experimental classes received intensive readiness training in visual perception, auditory discrimination, and language skills. All were tested at

25-month intervals. Analyses consisted of estimations by a variety of oral and silent reading tests. Growth curves were established according to race, age, sex, and type of group. Growth was indicated in the auditory-visual abilities for all groups. The program was found to be of value for black pupils. Detailed results and conclusions are presented.

Bilingual Education

541. Finocchiaro, Mary; King, Paul F.. Bilingual Readiness in Earliest School Years: A Curriculum Demonstration Project. Bilingual Readiness in Primary Grades: An Early Childhood Demonstration Project. Final Report. New York: Hunter College, City University of New York, 1966; 272p. [ED 033 248]

These two curriculum demonstration projects on bilingual readiness in the earliest school years contain many similarities. Both were formed on the thesis that young children can and will learn a second language readily, and that the urban classroom mixture of Spanish-speaking, English-speaking, and Negro-dialect-speaking children can be capitalized on to further bilingual and intercultural development of all groups. The objectives of the projects were to (1) foster bilingual development in children at a prime readiness age (four to eight), (2) promote positive attitudes among native English speakers toward the language and culture of other groups, and (3) enhance the self-concept and pride in heritage of children speaking Spanish while teaching them English. In both studies, a bilingual specialist met with classes of kindergarten and first-grade children fifteen to twenty minutes per day. Both English and Spanish were used during these periods. Much of the curriculum activity involved listening to stories, storytelling, singing, dramatization, and game playing. Finocchiaro took a more group-oriented approach, whereas King's more individualized approach relied on the use of instrumentalization for repetitive reinforcement during the lesson and after the lesson as an aid to the teacher. The reading readiness program was also integrated into the King project. Both studies concurred in the conclusion that bilingual readiness can be developed at this age level.

542. Horn, Thomas D. A Study of the Effects of Intensive Oral-Aural English Language Instruction, Oral-Aural Spanish Language Instruction and Non-Oral-Aural Instruction on Reading Readiness in Grade One. Austin: University of Texas, 1966, 115p. [ED 010 048]

This study compared the effectiveness of three methods for developing reading readiness in Spanish-speaking first-grade children. The methods used were (1) English language instruction with audiolingual techniques, (2) Spanish language instruction with audiolingual techniques, and (3) language instruction using the same materials as methods one and two, but without audiolingual techniques. Sample first-grade classrooms were arbitrarily assigned to one of the

three treatments (a total of twenty-eight were used). The Metropolitan Readiness Test, originally designed for measuring reading readiness for an English-speaking population, was used in the project to secure pretest and posttest criteria scores. This instrument, however, proved invalid for measuring the effects of intensive oral language instruction. In addition, no other usable instrument was found available for assessing levels of oral language development for the project population in either English or Spanish. This factor resulted in a higher mean on the final criterion scores for the children who had no audiolingual training. A large number of zero scores was attained on the pretesting exercises which clearly demonstrated, as well, the inappropriateness of the standardized test for the sample groups. Differences between the treatment groups on their posttest mean scores were not significant. It was determined that additional research clearly needed to be accomplished in the field.

Curriculum Guides

543. Ayers, Dorothy; and others. <u>Tentative Reading Readiness Curriculum for East Chicago Public Schools</u>. 1962, 58p. [ED 002 604]

Objectives are to develop visual and auditory discrimination, motor coordination, social adjustments, language facility, familiarity with and acceptance of classroom procedure, interest in reading, independent thinking, number awareness, and appreciation of art and music. Unit areas follow the outline of objectives, and are taught as part of the daily program, rather than in a specific chronological sequence. Teaching methods are adapted to individual differences in the classroom. A pleasant and interesting classroom atmosphere stimulates the desire to learn. Although all children are creative, different forms of expression and media work best with different children, and the teacher's awareness of the suitability of various materials and techniques makes the learning process more effective. Children should be given tasks suited to their capabilities, their understandings, and their interests. They should be given the opportunity for independent study. Suggested activities for developing abilities needed for success in beginning reading include story-telling, field trips, action games, dramatizations, library visits, and group discussions. A list of commercial aids which may be used as sources for ideas or activities in visual discrimination, number awareness, and music is presented. A bibliography of approximately seventy entries is included.

544. Canzano, Marlene; and others. <u>Reading Readiness in the Kindergarten</u>. San Jose, Calif.: San Jose County Board of Education, 1964, 55p. [ED 002 594]

Reading readiness in young children is influenced by several factors. Physical factors of visual and auditory acuity, motor coordination, and general good health contribute to readiness. Socially, the

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child must be self-reliant, cooperative, able to share with others, able to assume responsibility, and have good listening habits. Mental maturity plays another important role in preparing to read. The child should have a mental age of about 6 1/2 years, should be emotionally secure, and should have a good memory span and speech habits. The environmental factors which influence reading readiness are good preschool instruction, enrichment experiences, and satis- factory home and school conditions. The acquiring of reading readiness is a process which must be developed by the teacher. Lesson suggestions to develop skills in the following areas are presented as teacher guides: left to right eye movement; inter- pretation of pictures; classification of relationships; identifica- tion of sounds and initial consonants; visual discrimination of likenesses and differences in shape, direction, detail, pairs arrangement, letters, and words; memory games; and the building of color vocabulary. The experience chart is discussed as an effective means of developing language skills. The chart consists of short sentences dictated orally by the class and written by the teacher on the board or a chart. The sentences go together to record a groupwide experience. The development of number-readiness through planned and incidental experiences is also discussed in the teacher's guide.

545. Levin, Harry. Project Literacy, Coding Unit 1966. A Cognitive Approach to Reading Readiness--Coding Games. 1966, 45p. [ED 011 583]

A new curriculum of coding games was developed for beginning readers. The curriculum's content emphasized teaching the child to decode letters into sounds that represent language. The purpose was to show the child the reasonableness of the relationship between writing and speech. The coding games began with an emphasis on language and the various codes that can be used to stand for lan- guage. Pictures and picture-symbols were used to introduce written codes. The games were completed with an introduction to the use of alphabetic code to supplement the ability to communicate with simple written symbols. The curriculum was tried out in two kindergarten classes, and the results achieved by use of this curriculum were evaluated by interviews with individual children. Although only one child knew that a letter stands for a sound, the children understood that codes stand for language and could handle codes effectively. Followup recommendations, as well as an outline of the curriculum itself, were presented in the report. The curric- ulum was developed as part of "Project Literacy," a comprehensive research program in areas of education relevant to the acquisition of reading and writing skills.

546. Brooks, Barbara J. An Oral Language Development Program for the Pre- school. Project Sesame. Working Document Number 1. Washington, D.C.: Office of Education, 1968, 116p. [ED 028 167]

An ESEA Title III language development program, originating in Mifflinburg, Pa., is presented in 60 twenty-minute lessons to help

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prepare preschoolers for the reading experience. Four areas of language usage and reading readiness are stressed--auditory discrimination or phonology; letter discrimination; stylistics; and morphology, grammar, and syntax. The presentation recommends that verbal behavior be developed in a stimulus-response situation that reinforces conditioned oral responses through repetition and the use of various materials and motivational techniques. Numerous activities and exercises are included to develop in preschool children such language skills as the recognition of sound-symbol relationships, initial consonant and vowel sounds and blends, rhyming words, and complete sentences.

547. Valladares, Ann E.; and others. SEL/Project Language. Level II, Kindergarten, Volume II (Lessons 17-321). Atlanta, Ga.: Southeastern Education Laboratory, 1971, 289p. [ED 054 866. Also available from Southeastern Education Laboratory, 3450 International Blvd., Suite 221, Atlanta, Ga. 30354 ($3.00)]

This curriculum guide contains the Southeastern Education Laboratory/ Project Language Lessons 17-32, stressing listening, speaking, and reading readiness for disadvantaged kindergarten children. The lessons are designed to be used in SEL's mobile preschool units, or as readiness materials for kindergarten. The major emphasis of this intervention program is on the teaching of language skills in combination with subject matter content using a language-experience approach. Each lesson lists specific behavioral objectives, materials, time needed, procedures, and suggestions for supplementary activities. Songs, resource books, and stories are correlated with concept studies in each unit. This lesson series centers around the Farm (Unit Three), the City (Unit Four), Community Helpers (Unit Five) and Transportation (Unit Six). Appendix A presents a pupil's book, sample pages from the companion workbook to be provided for each child. Appendix B lists materials needed for one class to implement this curriculum. The first volume of SEL/Project Language (Lessons 1-16) is available as PS 004 669. The complete pupil's book (Lessons 1-32) is available as PS 004 670, and the teacher's handbook is available as PS 005 022. This project was sponsored by the Division of Educational Laboratories of the National Center for Educational Research and Development.

Research

548. Baker, Eva L. Methodological Considerations for Future Readiness Research. Paper presented at the Annual Meeting of the International Reading Association, Boston, April 24-27, 1968, 12p. [ED 026 208]

The following criticisms of current practices for determining reading readiness are discussed: (1) the variables measured by readiness tests are in many cases unrelated to instruction; (2) while the variables measured are correlated with reading achievement, this association does not attribute causality; and (3) the criterion

selected for measuring reading achievement is often an achievement
test written to maximize individual differences rather than to
measure success in a given program. The subcomponents or pre-
requisites of a particular reading program need to be developed
through research. A criterion-references test could be developed
which would measure the skills that should be mastered before
formal instruction is begun.

549. Barrett, Thomas C. The Relationship Between Measures of Pre-
Reading Visual Discrimination and First Grade Reading Achievement--
A Review of the Literature. 1965, 28p. [ED 010 977]

This study reviews the literature concerning the relationship
between measure of prereading visual discrimination and first-
grade reading achievement. The relative predictive power of visual
discrimination of letters, words, geometric designs, and pictures,
when these abilities are studied individually and in combination,
is indicated. The report includes studies investigating visual
discrimination at the beginning of the first grade, and reading
achievement later in the first grade. The investigations are
presented under three major categories--those that study the rela-
tionship between verbal and visual discrimination, those that relate
nonverbal and visual discrimination, and those that compare the
relationships of various types of visual discrimination with reading
achievement when these relationships are obtained under similar
conditions. Tables and references are included.

550. Bennett, Stan. An Evaluation of Some of Ashton-Warner's Assumptions
about Beginning Reading. Based on the author's dissertation, sub-
mitted to the University of Michigan, 1970, 51p. [ED 059 834]

A total of 14 four- and five-year-old girls learned to read two
blocks of twelve words, each block consisting of (1) four words
requested by each child (OWN words); (2) four words mentioned by
Ashton-Warner as "one look" words for individual children (AW
words); and (3) four words from the Scott-Foresman Basal Reader
Series (BR words). Measures of emotionality/arousal, meaningful-
ness, word frequency, and word length were obtained in the following
ways: individual child's rating of word emotionality, percent
galvanic skin responses (GSR) deflection, Noble's meaningfulness
(number of different free-associates by the child), Thorndike-
Lorge estimate of word frequency, and number of letters in each
word. No significant differences occurred between OWN, AW, and BR
words on a two-minute retention test; but 24-hour retention was
greater for OWN words than for AW or BR words. OWN words elicited
significantly greater GSR's, and were more meaningful than either
AW or BR words. Children also rated OWN words as significantly
more emotional than BR words. In the variables of word frequency
and word length, OWN words significantly differed from BR words,
but were similar to AW words. Findings and their implications were
discussed. Figures, tables, a bibliography, and an appendix listing
the OWN words are included.

551. Blair, John Raymond; Ryckman, David B. Visual Discriminatory
      Ability among Prereaders. Ann Arbor: University of Michigan
      Center for Research on Language and Language Behavior. 1968,
      12p. [ED 028 033]

      The ability of fifty lower middle-class and twenty-five upper middle-
      class prereading children to discriminate between pairs of uppercase
      alphabet letters was tested in this study, sponsored by the Bureau
      of Research of the U.S. Office of Education. This study used a set
      of 3 x 5 cards with a sample stimulus in the upper center section
      of each card, and two alternative choice stimuli just below and to
      the right and left of the sample. The 650 total cards were divided
      into five sets of 130 cards. The two major subject groupings were
      divided into five groups each, and were tested with one set of 130
      cards. An analysis of variance showed that the differences between
      groups both within and across each major grouping were not signifi-
      cant at·the .05 level. The range of errors per subject was from
      0 to 17 on 130 items. The letter pairs significantly confused were
      M-N (8); M-W and S-P (5); H-A, I-J, L-J, and K-X (3); and B-X, H-X,
      N-X, I-L, P-R, A-X, and H-W (2). The uppercase letters with the
      lightest percentage of errors were in descending order: M, N, K,
      X, H, P, W, and I. Tables and references are included.

552. Burton, Jane; Harris, Larry A. Research on Elementary Reading:
      Reading Readiness. ERIC/CRIER Reading Review Series, Volume 2,
      Bibliography 15. Bloomington: Indiana University, 1969, 124p.
      [ED 029 163]

      Research on reading readiness, sponsored by the Bureau of Research
      of the U.S. Office of Education, is listed in two sections: Part 1,
      1950 to the present, and Part 2, 1900-1949. Within each section,
      citations are alphabetized according to author's last name, and
      are followed by a descriptive abstract in Part 1 and a brief annota-
      tion in Part 2. A broad definition of reading readiness ranging
      from maturation as a factor to intensive training programs was
      employed, so that users with varying concepts of readiness would
      find this document helpful. Source material for this bibliography
      was drawn from the seven basic references of the ERIC/CRIER document
      collection: Published Research Literature in Reading 1964-66,
      1950-63, and 1900-49; USOE-Sponsored Research on Reading; Recent
      Doctoral Dissertation Research in Reading; International Reading
      Association Conference Proceedings Reports on Elementary Reading;
      and International Reading Association Conference Proceedings Reports
      on Secondary Reading.

553. Carrithers, Lura M. Beginning Reading Patterns and Preschool
      Emotional Problems. 1965, 9p. [ED 011 223]

      Four hypotheses were investigated in a study designed to discover
      whether reading patterns and success during children's primary
      years could be anticipated from emotional classifications determined
      during their preschool years. It was hypothesized that children
      with emotional difficulties during preschool years would have more

difficulty learning to read, would follow different reading
patterns, and have more negative attitudes. Also, it was hypoth-
esized that assessment of emotional classifications during preschool
would provide clues to later reading difficulties. The subjects
were sixty-one children enrolled in the Campus Elementary School at
the University of Wisconsin--Milwaukee. All were given an emotional
classification at the preschool level by a qualified school psychol-
ogist, by a social worker who visited the mother at home, and by
the children's teachers. Certain reading patterns were outlined,
and the children were tested three times each year with the Gray
Oral Reading Paragraphs for evidence of following these patterns.
Reading achievement was determined by the Metropolitan Achievement
Test given each spring. Reading attitudes were rated by a trained
research assistant. In general, all hypotheses were accepted.
Implications for education and references are provided. This article
is a reprint from <u>Educational Horizons</u>, Fall 1965.

554. Ching, Doris C. <u>The Teaching of Reading in Kindergarten</u>. Paper
presented at the Annual Meeting of the International Reading Assoc-
iation, Anaheim, Calif., May 6-9, 1970, 12p. [ED 042 580]

This study was concerned with assessing both prereading and reading
activities on the kindergarten level. A questionnaire survey was
made of selected aspects of the content and conduct of the kinder-
garten prereading and reading programs in school districts through-
out the state of California. The questionnaire used consisted of
three parts: Part 1 was concerned with general background informa-
tion on the community, school, and teachers; Part 2 with reading.
readiness; and Part 3 with the formal reading program. Twenty main
findings of the study were explained. The study seemed to indicate
that kindergarten teachers need more help and guidance concerning
the place of reading and the methods and techniques of reading in
the kindergarten curriculum. District and school administrative
personnel must correct this problem if the individual needs of the
pupils are to be met in regard to preparing and teaching the chil-
dren to read. References are included.

555. Clifford, Clare; Wattenberg, William M. <u>Relationship of the Self-</u>
<u>Concept to Beginning Achievement in Reading</u>. Detroit: Wayne State
University, 1962, 65p. [ED 002 859]

This exploratory study was designed to analyze data to determine if
the association reported by other investigators linking low self-
concepts to reading difficulties was correct, or was caused by
unfortunate experiences in reading, undermining self-concepts. A
sample consisting of 185 kindergarten entrants was interviewed and
observed for ratings in relation to their self-concept. Two years
after completion of kindergarten, the pupils were again measured
or rated as to (1) self-concept, and (2) ego strength. Two series
of statistical treatment were utilized--(1) a dichotomized indica-
tion of reading progress, and (2) subgrouping by sex, socioeconomic
class level, type of school, and present reading book. The results
of this study would suggest that measures of self-concept at the

kindergarten level would add significantly to the predictive
efficiency now attainable through mental ability tests. It would
appear that the self-concept stands in a causal relationship to
reading achievement, and that progress in reading does not have a
marked effect in the formation of the self-concept. Recommendations
are made for more research in this area using a variety of techniques
and designs.

556. Cohen, S. Alan. Survey of Reading Research. Let's Ask About Begin-
ning Reading. New York: Mobilization for Youth, Inc., 1963, 16p.
[ED 001 064]

Short answers are given to questions asked about general findings
in educational research, based on empirical evidence collected in
research theses at Boston University. Eight question areas deal
with students in grades 4-6. Reading, both oral and silent, word
analysis and spelling, children's interest and preferences, vocabu-
lary, mental imagery, texts and workshops, and study skills are
treated. Beginning reading, basal readers, factors affecting
reading achievement, reading tests, and material use are treated
for grade 1.

557. Coleman, E.B.; and others. Collecting a Data Base for a Reading
Technology. Austin: University of Texas, 1971, 65p. [ED 046 678]

A model for transforming data from verbal learning experiments into
tables useful to an educational technician was developed, based on
a similar one for scientific agriculture. The necessary data were
obtained through two experiments replicated upon relevant popula-
tions. In the first study, a series of free-recall experiments was
performed using the one thousand most frequently used words as
stimuli and 87 five-year-old children as subjects. These experi-
ments provided a scaling of common words according to response
availability, which could be used in conjunction with measures of
stimulus discriminability to select an optimum list of words to
teach look-and-say learning. The second study was comprised of
two experiments of a series to determine the optimum list for
teaching phonic blendings. In the first experiment, 287 two-
phoneme syllables were blended by seventeen preschool children.
In the second experiment, six groups of twenty preschool children
received training with vowel-consonant and consonant-vowel blends
presented in various orders. Tables, a rank ordering of words
according to ease or recall, and references are included. This
study was sponsored by the Bureau of Research of the U.S. Office
of Education.

558. Dawson, Mildred A., comp. Teaching Word Recognition Skills. Newark,
Del.: International Reading Association, 1971, 308p. [ED 068 914.
Also available from International Reading Association ($4.00 non-
member, $3.00 member)]

A series of articles with the chief emphasis on phonics as a means
of analyzing words is presented. Various articles pertain to
elementary, secondary, and college level instruction. The first
of the five parts into which the volume is divided is comprised of
a single article, which gives an excellent overview of the field of
word recognition. Part 2 includes a d

elementary, secondary, and college level instruction. The first of the five parts into which the volume is divided is comprised of a single article, which gives an excellent overview of the field of word recognition. Part 2 includes a dozen recent articles that present the overall general program of word analysis and the policies that underlie it. In Part 3 are articles which evaluate certain phonic elements and the utility of generalizations concerning them. For instance, two articles discuss rules that deal with accents on syllables, and their effect on the pronunciation of words. Part 4 is concerned with such aspects of word recognition as sight vocabulary, sensory cues, visual discrimination, contextual clues, and phonics. The articles differ from those in Part 3 in that they more narrowly deal with particular aspects of word recognition, and are more concerned with methodology. Certain articles were found to be only partially pertinent to a volume dealing with word recognition, and are included in a general section in Part 5. Tables and references are included.

559. Durkin, Dolores. The Achievement of Pre-School Readers--Two Longitudinal Studies. Newark, Del.: International Reading Association, 1966. [ED 014 414. Document not available from EDRS. Available from International Reading Association]

Two longitudinal studies of the effects of early reading on later achievement are reported. Early readers are children whose reading was the product of nonschooling, who identified eighteen out of thirty-seven words on an oral test, and who could achieve a raw score on the Gates Primary Reading Tests. The 1958 study tested forty-nine early readers over a six-year period, and compared their achievement with that of equally intelligent nonearly readers. The 1961 study examined the progress of 156 early readers over a three-year period and also compared their achievement with that of non-early readers. The tests used paralleled those used in the first study. The results for both studies indicated that beginning first graders differ greatly in what they can do and what they want to do, and that the average achievement of early readers with five or six years of schooling was significantly higher than the average achievement of nonearly readers of comparable intelligence who had six years of schooling. The need for more flexible kindergarten programs is implied. The tabulated results are included in this report. This article appeared in the Reading Research Quarterly, Volume 1, Summer 1966.

560. Durkin, Dolores. Early Reading Instruction--Is It Advantageous? Paper presented at the Annual Meeting of the International Reading Association, Atlantic City, N.J., 1971, 8p. [ED 072 413]

Some of the research dealing with pre-first-grade reading is discussed in relation to an experimental program with four-year-olds and pre-first-grade reading. The author states that little factual information exists for this topic, and the majority of existing reports deal primarily with Head Start. Some of the shortcomings of reports on early reading are indicated: (1)

failure to specify methodology; (2) failure to indicate the amount
of time spent on reading; (3) insufficient descriptions of reading;
(4) use of limited kinds of instruction; and (5) failure to stay
with pre-first-grade readers long enough to assess the future
effects. The report indicated that a basic problem in pre-first-
grade reading is that many schools are not ready to deal with
earlier starts in reading, and that meaningful assessments of pre-
first-grade starts in reading cannot occur until schools use and
take advantage of such starts.

561. Durkin, Dolores. A Two-Year Language Arts Program for Pre-First
Grade Children: First Year Report. 1968, 19p. [ED 029 686]

In the spring of 1967, two groups of about twenty four-year-olds
from varying socioeconomic backgrounds of a small Midwestern commu-
nity were subjects in a study to design a preschool curriculum.
After an IQ test, individual identification tests (word, letter,
and numeral) were administered to determine the children's knowledge.
Home interviews and classroom visitations by parents were conducted.
The program had a language arts focus rather than a reading focus,
used all phases of language arts appealing to children's interests,
and developed reading vocabularies through the whole-word approach.
Letter, word, and numeral identification was stressed. Reading and
conversation periods were held at least once a day. After eight
months, tests were readministered, and while achievement in some
goals was not assessed quantitatively, it was assumed that such
achievement would have a positive effect on later school performance.
Because this study concerns only the first of a two-year project,
overall results will be reported later.

562. Early Childhood. Papers presented at the Annual International
Convention of the Council for Exceptional Children, Chicago, Ill.,
April 19-25, 1970. Arlington, Va.: Council for Exceptional Chil-
dren, April 1970, 123p. [ED 039 385]

The report includes papers presented on early childhood at the
1970 convention of the Council for Exceptional Children. Discus-
sions included are concerned with (1) the effectiveness of teach-
ing selected reading skills to children two to four years old by
television, by Barbara J. Dunn; (2) educational materials as an aid
in evaluation of preschool multihandicapped children, by Ronnie
Gordon; and (3) the use of instructional materials with multihandi-
capped preschool children, by Carol Halliday. Additional papers
present a progress report of a project in early identification and
remediation of learning problems in elementary school children
attempting to increase classroom success by James Barnard, and a
panel of research findings with programs for preschool children
and parents by Merle B. Karnes.

563. Elman, Elaine. The Effect of Pictures on the Acquisition and
Retention of Sight Words. M.ED. Thesis, Rutgers University, The
State University of New Jersey, 1973, 86p. [ED 071 048]

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This study was designed to investigate the differences in effectiveness in teaching sight words to kindergarten children by using words only (no-picture group), words and simple pictures (simple-picture group), and words and complex pictures (complex-picture group). The subjects were thirty kindergarten children selected from two kindergarten classes. The children were randomly assigned to one of three experimental groups: ten children to the no-picture group, ten to the simple-picture group, and ten to the complex-picture group. A pretest was given to insure that the subjects could not read the four sight words used in the experiment. Comparisons were made of the mean number of correct responses during acquisition, test trials, and retention trials for the three treatment groups. During acquisition, significant mean differences among the training groups favored the picture groups, with simple-picture group scores significantly higher than either of the other groups. During both test and retention trials, nonsignificant differences favored the no-picture group. It was concluded that the use of pictures did not distract children from learning sight words. Pictures were facilitative in teaching sight words, especially those which began with the same consonant.

564. Gallistel, Elizabeth; and others. The Relation of Visual and Auditory Aptitudes to First Grade Low Readers' Achievement under Sight-Word and Systematic Phonetic Instructions. Research Report. Minneapolis: Minnesota University, Research Development and Demonstration Center in Education of Handicapped Children, 1972, 32p. [ED 079 714]

Ten auditory and ten visual aptitude measures were administered in the middle of first grade to a sample of 58 low readers. More than half of this low reader sample had scored more than a year below expected grade level on two or more aptitudes. Word recognition measures were administered after four months of sight word instruction and again after an additional four months of intensive phonic instruction. Correlations of aptitude and word recognition scores after sight word instruction were compared with correlations of aptitude and word recognition scores after phonic instruction. The results indicated that visual aptitudes were not more highly correlated with achievement after sight word instruction, nor were auditory aptitudes more highly correlated after phonic instruction. Blending, Auditory Closure, and WISC Coding were consistently related to achievement for both kinds of instruction. All the children learned to decode before the end of eight months of experimental instruction.

565. Gleitman, Lila R.; Rozin, Paul. Teaching Reading by Use of a Syllabary. 1972, 52p. [ED 075 803]

Use of the syllable as a unit for initial acquisition of reading is advocated. It is argued that since English alphabetic writing is based on a mapping between sound-stream and symbol, a decoding approach is necessary at early stages of the acquisition process. However, conventional phonics methods confound two very difficult

tasks in initial learning: (1) acquiring the notion that the orthography tracks sound directly and meaning only indirectly; and (2) understanding that the alphabetic unit corresponds to the highly abstract phonological unit, or phoneme, which is both difficult to pronounce in isolation and difficult to recognize and blend. On the basis of research in speech perception, it is suggested that syllables are more natural units than phonemes because they are easily pronounceable in isolation and easy to recognize and blend. Introduction to a syllabary will teach children the basic notion of sound-tracking uncontaminated by simultaneous introduction of the difficult and inaccessible phoneme unit. Preliminary evidence that a simple 23-element syllabary can be acquired with ease by inner-city and suburban kindergarteners is presented. In particular, it is shown that this population can blend previously untaught combinations of known syllables to form and comprehend new multisyllabic words.

566. Gunderson, Doris V. Readiness Readiness--Fact and Fancy. October 5, 1965, 11p. [ED 011 485]

Fourteen studies in the area of reading readiness are surveyed. Much of the research is directed at the child who needs a period of readiness, particularly the culturally disadvantaged child. The validity of readiness tests, the importance of sex differences, and beginning readers are other topics discussed. References are given. This article is published in the Journal of the Reading Specialist, Volume 11, October 5, 1965.

567. Gunderson, Doris V. Research in Reading Readiness. Washington, D.C.: U.S. Office of Education (DHEW), 1964, 42p. [ED 001 855]

Research is compiled on the topic of reading readiness. Numerous research studies have demonstrated that children vary greatly in the degree to which they possess "reading readiness" and that children are definitely aided by a reading readiness program. Disagreement exists among reading authorities on certain aspects of readiness. Areas of discussion include the description and importance of the actual factors determining readiness, the proper function of a reading readiness test, the length of time to be spent in a readiness program, the proper age to begin reading, and the nature and extent of the role assumed by the family and home in developing reading readiness. The research findings and dis-agreements of interpretation in each of these areas are reported and discussed. There is a distinct need for further research in readiness for beginning reading. A number of areas have not been investigated, and many research studies lack statistically sound structuring. As the base of knowledge concerning reading readiness becomes firmer with continued research, the teaching of reading readiness will be strengthened.

568. Hall, Vernon; Caldwell, Edward. Analysis of Young SS Performance on a Matching Task. New York: Syracuse University, Center for Research and Development in Early Childhood Education. 1970, 9p. [ED 046 644]

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Research indicates that young children seem to have considerable difficulty in discrimination between the letters B, C, P, and Q. Also four year-olds appeal to commonly make rotation and reversal errors with letter-like forms. Whether young children will perform significantly better or not in deciding whether two shapes are called same or different after a brief training period was investigated. The subjects were twenty nursery-school children randomly selected from approximately one hundred children enrolled at a nursery school supported by the Syracuse branch of the National Laboratory for Early Childhood Development. They were randomly assigned to two groups; the experimental group received an initial training period, and the control group did not. The results showed that the subjects in the experimental condition, in which the experimenter's definition of same and different was made explicit, performed significantly better than the control group. Figures, tables, and references are given.

569. Hartley, Ruth Norene. An Investigation of List Types and Cues to Facilitate Initial Reading Vocabulary Acquisition. Washington, D.C.: Office of Education (DHEW); Bethesda, Md., 1968, 172p. [ED 091 667]

This experiment was designed to investigate the relative value of three sources of cue (graphic stimulus only, graphic stimulus plus a picture cue, and graphic stimulus plus a context cue) in combination with two list types (minimal and maximal contrast) as a means of facilitating the acquisition of initial reading vocabulary. The subjects, 137 first graders, were randomly assigned to treatment groups and were given four types of tests: the learning test trials used to evaluate progress during the learning session; a twenty-four hour test used to evaluate retention of the words; a posttest used to evaluate retention of the words over a longer period of time; and a transfer test used to evaluate the ability to recognize unpracticed words that used the same initial and final elements as those used in the practiced word lists. The analyses of the correct answers made on each source of cue combined with each list type resulted in three sources of variation which were significant or approached significance on all tests. The main effect of high and low ability grouping, minimal and maximal contrast list types, and sex was significant.

570. Heatherly, Anna L. Attainment of Piagetian Conservation Tasks in Relation to the Ability to Form Hypotheses as to the Probable Content of Story Material among First and Second Grade Children. Ed.D. Dissertation, University of Virginia, 1972, 159p. [ED 065 855. Document not available from EDRS. Available from University Microfilms (Order No. 72-22, 634, MF $4.00, Xerography $10.00)]

The purpose of this study was to investigate the relationship between performance on Piagetian conservation tasks, and the ability to form hypotheses as to the probable content of story material among first- and second-grade children. Cognitive operations selected for comparison were operations concerning conservation of mass, conservation of quantity of liquid, conservation of number,

and a class inclusion task. The findings indicated that conservation attainment is related to chronological age, mental age, hypotheses testing rating score, Gates MacGinitie vocabulary and comprehension scores, and socioeconomic status. Partial correlations indicated that conservation attainment is a function of mental age. The findings also indicated that hypotheses testing status and conservation attainment are related to scores on a standardized reading rest and that this relationship holds even when the effects of chronological age, mental age, and socioeconomic status are partialed out.

571. Heyman, Marjorie Rowe. Testing Word Recognition as a Function of Learning Modality. New Brunswick, N.J.: Rutgers, The State University, Graduate School of Education, June 1970, 87p. [ED 046 660]

Training in word recognition based on a child's dominant sensory modality (visual, auditory, or kinesthetic) was compared with training based on nondominant modality. Twenty-five first-grade children with no prior instruction in reading were given visual, auditory, and kinesthetic modalities tests, and a pretest of recognition of the words used in the experimental training. In addition, all subjects experienced three one-week experimental training periods, one for each modality, with each period including tests of immediate and delayed recall of words taught. Due to the lack of any available suitable group learning-modalities test, the author developed one which proved to be unreliable. However, further analysis indicated that the experimental training test procedure was actually itself a reliable learning-modalities test. Author-made tests, tables, and references are given.

572. Hillerich, Robert L. An Interpretation of Research in Reading Readiness. Elementary English 43 (1966), 9p. [ED 011 484]

This study summarizes and interprets the results of seventeen studies on reading readiness. All but one of the studies were completed since 1957. Reading readiness is defined, and the differences between traditional and current theory are discussed. Studies of formal reading readiness instruction in kindergarten are described. Conclusions about kinds of reading readiness experiences, tests, studies, and the age when children begin reading readiness and reading instruction, are drawn from the reported research. Implications for further research are included. References are given.

573. Hoover, Mary Rhodes; and others. An Experiment in Teaching Reading to Bidialectal Kindergarten Children. Research and Development Memorandum No. 102. Stanford, Calif.: Stanford Center for Research and Development in Teaching, 1973, 33p. [ED 074 465]

Four different treatments were used over a period of five months in this experiment concerning the teaching of reading skills to 35 black kindergarten children. The treatments were: (1) spelling patterns/phonic approach using black standard English, (2) a sight approach using black standard English, (3) a sight approach

utilizing black nonstandard English during the first two months of instruction, and (4) a spelling patterns/phonic approach utilizing black nonstandard English during the first two months of instruction. The children's proficieney in both standard and nonstandard English was assessed on sentence repetition tests, and an attempt was made to measure their attitude toward black nonstandard speech on a matched guise preference test involving simple like/dislike reactions to 2 guises of 4 different speakers. The main results of the experiments were that the spelling patterns approaches proved superior to the sight approaches in 2 of the criterion measures: the Gates-MacGinitie vocabulary test and experimenter's test that was based specifically on materials covering only the sight approach. No interaction effects between the treatments and either preference for or knowledge of black nonstandard English were detected.

574. Livo, Norma J. Reading Readiness: Research in Review. Bloomington: Indiana University, ERIC Clearinghouse on Reading, 1972, 50p. [ED 059 854]

This paper reviews the studies involving the more commonly measured reading readiness factors, discusses some unique studies, and projects what some needs of future research should be. The research areas discussed include reading readiness tests as predictors of success in beginning reading, auditory discrimination factors and their relation to beginning reading, visual discrimination factors and their relation to beginning reading, oral language development before beginning reading, intelligence factors and their relation to beginning reading, and studies of a more diverse nature. Some generalizations are offered as a result of the conclustion of research in all areas of reading readiness. The author recommends, in particular, that future research should examine specifically the effects of many of the unmeasured factors, and create and refine procedures to analyze and measure them. A 122-item bibliography is included.

575. MacGinitie, Walter H. Evaluating Readiness for Developmental Language Learning: Critical Review and Evaluation of Research. Paper presented at the Annual Meeting of the International Reading Association, Boston, April 24-27, 1968, 17p. [ED 025 390]

Readiness is not all-or-none. It depends on the method and materials to be used, and on the level at which instruction will begin. Maturation, heredity, and experience influences readiness, and most six-year-olds are ready to learn something about reading. Readiness research should attempt to find what and how a child is ready to learn, rather than whether he is ready to learn to read. Recommendations for improved research caution against interpreting the findings of readiness studies when the teaching method and materials are not specified, particularly when the sample is small. Researchers should avoid making misleading retrospective inferences about readiness, especially in the case of inferences of no relationship. Finally, one should not make the following faulty interpretations of correlational relationships: (1) assuming that correlational

differences due to individual test suitability differences or to
test reliability differences, imply differences in the relationship
of the underlying variables; (2) neglecting to analyze the nature
of various readiness tasks and to use this information in future
research regardless of the names presently given to the tasks; and
(3) overlooking the importance of sampling error in multivariate
analyses. References are included.

576. Marsh, George; Desberg, Peter. Current Basic Research in Beginning
Reading. 1973, 20p. [ED 074 444]

This paper reviews some recent research on the component skills
necessary to learn to read by phonic techniques. The review is
divided into four sections, each relating research on one of the
skills necessary for novel word decoding. The four skill areas
are: (1) learning invariant grapheme-phoneme correspondences;
(2) relating the isolated letter sounds to the same sounds in
words; (3) dealing with variant pronunciation of graphemes; and
(4) dealing with polysyllabic words on a lexical basis. A five-
page bibliography is included.

577. Morrison, Coleman, and Harris, Albert J. Effect of Kindergarten
on the Reading of Disadvantaged Children. New York: City, Univer-
sity of New York, Division of Teacher Education, 1968, 12p. [ED
035 512]

The reading achievement of children with and without kindergarten
experience was investigated as part of the Comparing Reading
Approaches in First Grade Teaching (CRAFT) project in New York City.
Children in grades 1 and 2 were taught reading by one of two
approaches: skills-centered, or language experience. Within the
former approach, two methods were used: basal reader, or phono-
visual (basal reader plus a phonics program). The latter used a
regular language experience method, or a language experience
audiovisual method. No control was exerted over the approach or
method used during third grade. The Stanford Achievement Test
was administered to 416 kindergarten and 168 nonkindergarten chil-
dren at the end of grade 1. The Metropolitan Achievement Test
was administered to the same group at the end of grade 2. At the
end of grade 3, 329 kindergarten and 114 nonkindergarten children
were given the Metropolitan Achievement test. The individual
pupil was used as the statistical unit. Results indicated that
the type of experiences provided black urban disadvantaged children
in the New York Public School kindergarten appeared to be beneficial
only for those who had subsequent reading instruction in a language
experience program. Their largest gains were made in grade 3,
indicating delayed effects for this approach. References and tables
are included. This study was sponsored by the N.Y. City Board of
Education and the U.S. Office of Education.

578. Mustico, Thomas W. Some Implications from Paired Associate Learning
on the Development of Reading Readiness. Paper presented at the

National Reading Conference, St. Petersburg, Fla., December 3-5, 1970, 13p. [ED 048 994. HC not available from EDRS. Available as Twentieth .earbook of the National Reading Conference, Inc., from Marquette University, 1217 W. Wisconsin Ave., Milwaukee, Wisconsin 53233]

Relationships existing between elements of intelligence, age, environment, and meaningfulness of materials were, examined, along with the hypothesis that an increase in meaningfulness of materials would 'cause the mean difference in learning scores for different intelligence levels to first increase, then decrease. In a paired-associate task, three lists of eight CVC trigram pairs of varying meaningfulness ratings were presented ten times each to 292 sub-jects. Of these, fifty-five were college sophomores, sixty were high school seniors, sixty were high school freshmen, fifty-seven were sixth graders, and sixty were third graders. Data collected on each subject included an IQ score, a socioeconomic status rating, and four measures of association on the trigram pairs representing varying degrees of meaningfulness. Results showed that relationships did in fact exist between intelligence and meaningfulness, between age and meaningfulness, and between socioeconomic status and meaningfulness. Mean differences in learning and IQ decreased with increases in meaningfulness; but in differing degrees for different age levels. Implications of these results for beginning reading instruction are discussed and include increased attention to associating tasks with children's experiences, language patterns, and environment. References and tables are included.

579. Olson, Arthur V. The Structure of Reading Readiness Ability. Paper presented at the Annual Meeting of the International Reading Assoc-iation, Kansas City, Mo., April 30-May 3, 1969, 11p. [ED 030 554]

The development of a research model to aid in the understanding of the hierarchical structure of reading readiness is described. Data were obtained by testing 218 first graders from three elemen-tary schools with the Frostig Developmental Test of Visual Percep-tion, the Gates Reading Readiness Test, the Metropolitan Readiness Test, the Olson Reading Readiness Tests, and the Wechsler Intelli-gence Scale for Children. The product moment method was used to compute the intercorrelations among the thirty-five variables. After an examination of the loading of the subtest variables, four large common factors, listed in order of increasing correlation with the factor best representing reading achievement, could be ordered as follows: (1) perceptual organization, (2) auditory-, visual discrimination, (3) verbal association, and (4) verbal com-prehension. Both a horizontal and a vertical plane were developed in this model. It is suggested that the order of the skills on the vertical plane would also develop horizontally and might or might not contribute to the achievement level of a higher order dependent upon the type of achievement measured. Questions for further investigation are posed, and references are included.

580. Research Studies on Kindergarten Education. Albany: New York
     State Education Department, 1964, 32p. [ED 002 521]

     A bibliography of research studies on kindergarten education
     reported between 1923 and 1964 is divided into four annotated
     sections. The first listing deals with values in kindergarten
     education--as a factor in adjustment, achievement, and progress in
     elementary school, as a factor in reading achievement and in pre-
     diction of reading success. Considered in the second group are
     entrance age and class size as factors in kindergarten education.
     Research on beginning reading with implication for kindergarten
     education is reviewed next, and is subdivided into the age of
     beginning reading, reading activities, and such reading factors as
     experience and informational background, mental age, readiness, and
     visual development. The final section contains relevant recent
     research on intellectual development and learning. The material is
     reported in professional journals or in government publications and
     is annotated.

581. Smith, Carl B.; and others. Reading Difficulties: Reading and the
     Home Environment. The Principal's Responsibility. Prep-2.
     Washington, D.C.: U.S. Office of Education (DHEW), Bureau of
     Research, and Division of Information Technology, and Dissemination,
     1969, 60p. [ED 034 078]

     This is the first monograph in the Prep Reading Series which focuses
     on reading difficulties and the cooperative efforts of various
     professionals to deal with the problems encountered. Each of the
     four volumes of the series directs its message to a specific person
     on a school staff; each focuses on a different aspect of treating
     reading difficulty and explains what can be done to make that
     treatment more effective. The target of this monograph is the
     school principal. It discusses environmental causes of reading
     problems, describes some successful school reading programs, and
     offers recommendations and guidelines to the principal for imple-
     menting similar programs in his own school. The kit also includes
     a bibliography of the references cited. Listed, too, are the
     services offered by the Educational Resources Information Center
     (ERIC) of the Office of Education, which will assist educators to
     keep informed on the latest research, development, and current
     practices in the teaching of reading.

582. Soderbergh, Ragnhild. Reading in Early Childhood. Quebec: Laval
     University, International Center on Bilingualism. Reprints of
     papers presented at the conference on Child Language, Chicago, Ill.,
     November 22-24, 1971, 25p. [ED 060 743]

     The reading instruction experiment described in this report is
     based on the theory that if a child learns to talk without formal
     instruction solely by being exposed to language, and if written
     language is to be considered as an independent system, a child could
     learn to read at the same age and in the same way as he is learning
     to talk, solely by being exposed to written language. He would

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then attack the written material, forming hypotheses, building models, and discovering the code of the written language--its morphemic, syntactic, and semantic systems. The author describes fourteen months of work teaching a two-year-old to read.- Details of the procedures and the results are provided. After this period, the child is capable of storing, analyzing, and comparing written words, and arrives at a knowledge of the grapho-phonemic correspondences that is a prerequisite for being able to decode any written message.

583. Speiss, Madeleine F.; and others. Reinforced Readiness Requisites from Theory to Practice. Albuquerque, N.M.: Southwestern Cooperative Educational Laboratory, 1970, 96p. [ED 040 977]

This booklet is an instructional aid for teacher trainers. Its aim is to help trainers familiarize teachers with the theory and proper use of the reinforced readiness requisites (RRR) program, a series of 145 lessons designed to give standard kindergarten and first grade entry and reading readiness skills to Mexican-American and Indian children. The RRR program is based on tangible rewards and group cooperation. In the initial stage of the one-year program, children are given toys if the class as a whole meets performance criteria in a lesson. Later the toys are replaced by tokens, and then the tokens are also phased out. The booklet contains an explanation of the theory behind the program, questions for group discussions, scenarios for role playing, story-boards and scripts of two slide presentations (one on the program content and the other on the reinforcement techniques) three sample lessons, and a nine-category classroom observation schedule. An appendix contains a list of media materials and written handouts which accompany the RRR teacher training programs. This study was sponsored by the Bureau of Research of the U.S. Office of Education.

584. Stallings, Jane A.; Keepes, Bruce D. Student Aptitudes and Methods of Teaching Beginning Reading: A Predictive Instrument for Determining Interaction Patterns. Final Report. Palo Alto, Calif.: Palo Alto Unified School District, 1970, 141p. [ED 043 475]

The question of whether reading methods interact differentially with student sequencing abilities was investigated in this study sponsored by the Bureau of Research of the U.S. Office of Education. One hundred and thirty-one children from three schools in Palo Alto, California, were given reading instruction using a linguistic approach (Palo Alto Reading Program), and one hundred and fifteen children from three Palo Alto schools used a whole-word approach (Macmillan, Harper and Row, and Scott-Foresman). A battery of pretests was administered in September, 1969, and a battery of posttests was given in January, 1970, after an instructional period of seventy days. The hypotheses tested were (1) children high in sequencing ability will exhibit higher reading achievement and less learning avoidance behavior in a whole-word method than in a linguistic method; and (2) children low in sequencing ability will exhibit higher reading achievement and lower learning avoidance

behavior in a linguistic method than in a whole-word method. The
results showed that children high in sequencing ability exhibited
higher reading achievement in the linguistic treatment than in the
whole-word method, while children low in sequencing ability
exhibited lower reading achievement in the linguistic treatment
than in the whole-word treatment. Sequencing ability was negatively
correlated with learning avoidance behavior in the whole-word
treatment, but was not correlated in the linguistic treatment.
References and tables are given.

585. Stanchfield, Jo M. Research: New Hope for Kindergarten Children.
Paper presented at the Meeting of the California Reading Association,
San Francisco, Calif., November 1971, 15p. [ED 058 011]

The effects of teaching prereading skills to kindergarteners of
their reading readiness scores were investigated. Seventeen
kindergartens providing a cross section of socioeconomic levels,
and representing different ethnic groups, were selected. Each
experimental school was then matched to a control school. In the
experimental schools, six major prereading skills were taught:
listening for comprehension of content, listening for auditory dis-
crimination, visual discrimination skills, oral language skills,
motor-perceptual skills, and sound-symbol correspondence skills.
Teachers in the experimental scholls received a teacher's manual
and met each week in the fall semester to receive additional mate-
rials and for discussions. The Murphy-Durrell Reading Readiness
Analysis was given to all children at the end of the school year.
Results indicated that in the total test of all individual tests,
the experimentals outperformed the controls, girls outperformed
boys, and the whites outperformed other ethnic groups. The Mexican-
Americans outperformed the blacks in the total test and all indi-
vidual tests except on the letter names test. The experimental
Mexican-American and black children achieved considerably higher
scores than the control white children. Materials used and teaching
techniques employed are described, and tables and references are
included.

586. Weber, Lillian. The English Infant School and Informational Educa-
tion. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971, 276p.
[ED 057 593. Document not available from EDRS. Available from
the publisher ($7.95, paperback $4.95)]

The results of the author's year and a half spent observing and
analyzing forty-seven British state schools for young children are
presented. The practice and process, the history and theory of
informal education in England's primary schools are examined.
Through descriptions of actual episodes, scenes, and schedules for
British children up to age eight, the author shows exactly how
English informal schooling provides individual attention for each
student despite large classes in poor neighborhoods and a limited
national budget. She discusses the curriculum in depth, especially
reading, math, and science. Her accounts describe how the English
organize their schools and train their teachers to achieve the

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adaptations required for informal education. In a summary chapter, she points out the differences in philosophy which characterize American elementary education as opposed to the British system.

Beginning Reading

587.   Atkinson, R.C.; and others. Instruction in Initial Reading Under Computer Control: The Stanford Project. Technical Report No. 158. Stanford: Calif. Institute for Mathematical Studies in Social Science, August 13, 1970, 44p. [ED 073 421]

This study, sponsored by the National Science Foundation, describes a program designed at Stanford University in the computer-assisted instruction (CAI) of reading, which has been used by children in kindergarten through grade 3. The program is an adjunct to classroom instruction, stressing the decoding aspect of reading, and leaving the communication aspect to the teacher. The report presents the rationale for the program; a description of how individualized instruction is affected by the program--reading readiness, letter identification, sight word vocabulary, spelling patterns, phonics, comprehension, and language arts; a description of the digitized audio system of the program; a discussion of how CAI can be scheduled with other class activities; and a discussion for the teacher of how to read the computer's reports of the student's progress. The authors conclude that CAI can free the teacher for more creative types of instruction and that this program is a feasible and economical way to raise the national level of reading.

588.   Brzeinski, Joseph; McKee, Paul. The Effectiveness of Teaching Reading in Kindergarten. Denver: Colorado State Department of Education, Denver County Public Schools, 1966, 146p. [ED 010 058]

This study investigated the effectiveness of beginning the teaching of reading in kindergarten. The longitudinal effects as well as the initial results were examined. The progress of the children in the study was followed from the kindergarten through the fifth grade. The sample consisted of 4,000 kindergarten pupils randomly assigned by the school to comparable control and experimental groups. Instructions were similar except for one major difference. The experimental group received planned, sequential instruction in beginning reading, while the control group had activities which developed reading readiness. The principal statistical technique was analysis of variance-covariance technique. The primary variable considered was the time of beginning reading. Other variables were mental age, chronological age, sex, TO, and other family characteristics. These latter variables were also used as covariables. Comparisons were made on the criterion variable (reading achievement), between experimental and control groups, and effects of other variables were studied in the same way. Analysis of variance allowed computation of the interaction between variables. In every case, attention was given to the interaction of the treatment variable (time

of beginning reading) with the other variables in determining the effect of the criterion variable (reading achievement). Optimum reading achievement was obtained by boys and girls who received the experimental beginning reading instruction in kindergarten, and who had an adjusted reading program in later grades. Such adjustment was necessary for the measurable advantages of early reading instruction to be preserved beyond the second grade. When the advantages of an early start in reading were followed up, statistically significant gains in reading achievement persisted throughout the entire study.

589. Durkin, Dolores. Children Who Read Early: Two Longitudinal Studies. 1966 [ED 019 107. Document not available from EDRS. Available from Teachers College Press ($4.25)]

The extension of the concept of readiness into education earlier in this century resulted in studies which concluded that children are not ready to read until a mental age of 6.5. But actual research on preschool reading was, as of 1957, extremely limited. Two longitudinal studies were undertaken to remedy this lack. Both studies sought to determine the percentage of preschool readers entering the first grade, the effect of this ability on later reading achievement, and factors which promoted this ability. The first study, begun in September, 1958, was based on a sample drawn from 5,103 first graders in Oakland, Calif. In this group were found forty-nine prereaders, or less than one percent. These forty-nine were given IQ tests, and were tested for reading achievement each year until 1964. The families were interviewed to determine their socioeconomic background, the personality characteristics of the early readers, and the way in which the early reading ability developed. The second study, started in September, 1961, tested 4,465 New York City first graders and found 156 early readers, or about 3 1/2 percent. A special group of thirty nonearly readers was matched on sex and IQ with a group of thirty prereaders. Much the same kinds of data were gathered in this study as in the first. Some general conclusions drawn from these studies were: (1) that pessimistic opinions about the effects of early and nonearly reading children were not corroborated, and (2) that the early and nonearly reading children were not markedly dissimilar. However, early readers tended to come from families that were more willing to help children learn to read. The findings of these studies also suggest that kindergarten programs should assist and encourage those children who wish to learn to read. Case studies of some prereaders in both studies and some nonearly readers of the New York Study are included.

590. Durkin, Dolores, comp. Reading and the Kindergarten; An Annotated Bibliography. Newark, Del.: International Reading Association, 1969, 9p. [ED 080 944. Also available from the International Reading Association (Order No. 303, $0.75 nonmember, $0.50 member)]

This 34-item annotated bibliography was compiled to help professional educators decide whether reading should be taught in kindergarten

and, if so, how the instruction should be conducted. The refer-
ences include varying and even opposing points of view. The
authors of the articles are teachers, administrators, professors,
and researchers.

591. Emmer, Sara K. The Difference in Effectiveness of Readiness and
Non-Readiness Training in Increasing First-Grade Reading Achieve-
ment. New Brunswick, N.J.: Rutgers, The State University, 1970,
80p. [ED 044 256]

This study investigated the difference in effectiveness in
increasing first-grade reading achievement of a traditional reading
program in which no words were taught, and a program that began
with formal reading instruction in preprimers and without reading
readiness. The subjects were 137 pupils in six first-grade classes
in a middle-class suburban community in central New Jersey. Pre-
tests of readiness and intelligence indicated no significant
differences between groups before training. One group received six
weeks of readiness training and ten weeks of reading instruction;
the other group received sixteen weeks oı reading instruction in
basal readers and no readiness training. The students were given
as posttests the reading subtests of the Stanford Achievement
Tests and the Metropolitan Readiness Tests. It was concluded that
omitting traditional reading readiness materials from the first-
grade instructional program did not decrease reading achievement,
and may, in fact, have increased reading achievement. Therefore,
it was suggested that first-grade reading instruction begin with
formal reading lessons. A bibliography is included.

592. Fry, Edward. Are Reading Readiness Materials Necessary in the
First Grade. 1965, 7p. [ED 002 600]

A study to determine if reading readiness materials are necessary
in the first grade reveals that they are not. The experiment was
conducted in public schools of a suburban middle-class community
in New Jersey. Tests were administered in September to all pupils
of the first grade. No reading instruction had been given in
kindergarten, and no published reading readiness materials were
used. Pupils in the nonreadiness group were given reading instruc-
tion in preprimers and primers of a different, but comparable,
series. Each class in both groups was divided into three separate
reading groups. When tests were administered in December, non-
readiness groups were definitely ahead in progress, undoubtedly
because more time was spent teaching reading. Tables showing
results of testing accompany the text.

593. Gammon, Elizabeth Macken. A Syntactical Analysis of Some First-
Grade Readers. Stanford: Calif. Institute for Mathematical
Studies in Social Science, 1970, 171p. [ED 046 628]

Two widely used first-grade reading series, Ginn and Scott-Foresman,
were analyzed in terms of six phrase-structure grammars in an
attempt to discover frequencies for sentence types. The six

grammars were noun phrase, verb phrase, verbal modifier, statements
without verbs, interrogative, and statements without verbs. Cate-
gorial grammars were written for comparison with noun-phrase and
verb-phrase grammars. A quantitative method for evaluating lin-
guistic grammars, developed from the analyses, provided a theor-
etical framework for accounting for various kinds of utterances.
Chi-square analysis showed the grammars to be well-suited to both
series, with the verbal modifier and statements without verbs
providing the best fits. The categorial grammars were approximately
equivalent to the phrase-structure grammars, making them possibly
more useful for further study since they require fewer manipulations
of the text. It was concluded that the method developed would be
useful in further analysis of reading materials. Such analysis
would be important in increasing the similarity of sentence struc-
ture in materials to that of children's speech. Tables and a bib-
liography are included.

594. George, John E. _Variables in Beginning Reading Instruction._ Paper
presented at the Third World Congress, Sydney, Australia, August,
1970; and also at the Annual Meeting of the International Reading
Association, Anaheim, Calif., May 1970, 20p. [ED 064 685]

This paper describes various approaches to beginning reading
instruction, and discusses the major factors which determine success
or failure in beginning reading, regardless of the approach used.
The teacher, the child, and the social and physical environment,
while being infinitely variable, can be controlled to great extent
by the teacher of beginning reading. The paper shows the beginning
reading teacher how to control her own behavior, the child's
behavior, and the social and physical environment, so that optimum
learning can be provided. Included are descriptions of the synthetic
and analytic phoncis approach, the linguistic approach, the visual-
auditory-kinesthetic tactile (VAKI) approach, the whole-word
approach, and language experience approach. A brief note concerning
research in beginning reading and a challenge to administrators
and teachers of beginning reading conclude the article.

595. Hoppock, Anne. _Reading in the Kindergarten._ Trenton: N.Y. State
Department of Education, 1966, 28p. [ED 011 814]

Arguments against formalized reading instruction in the kindergarten
were presented. After preliminary comments concerning the purpose
and plan of the conference, the New Jersey State Board standards
for kindergartens were discussed in light of their criteria for
establishment and their administration. The case against making
reading instruction a part of the kindergarten curriculum was
developed through an examination of the following research (partic-
ularly Durkin's): the long range effectiveness of readiness work-
books and other formalized readiness instruction; learning theory;
the purposes and goals of the kindergarten; and the views of leaders
of national repute in the fields of reading, early childhood educa-
tion, human development and learning, pediatrics, neurology, child
psychiatry, and psychology. It was concluded that although students

who come to kindergarten knowing how to read or desiring to read should not be prevented from doing so, research has not yet provided evidence that early systematic reading instruction greatly accelerates reading achievement.

596. Leeper, Sarah L. <u>Early Reading in Kindergarten</u>. College Park, Md.: University of Maryland, 1967, 10p. [ED 038 258. Document not available from EDRS. Available as Speaking to the Issues: Position Papers in Reading, p. 110-119, University of Maryland]

An examination is made of proposals for early reading in terms of the best time for beginning instruction and the effects upon children. In any discussion regarding early reading, one must distinguish between prereading activities and formal reading instruction and must determine whether formal instruction is/intended for all children, or for those who are ready to read or 'already reading. The discussion here is considered in relation to two groups of children: those who read before entering first grade and those who are taught to read before the age of six. Several studies of such children are examined, and both the pro and con views of formal reading instruction for young children are given. The conclusion reached is that young children who are ready and want to read should be helped, of course, but that teaching reading to all five year olds on a wholesale basis is questionable and may well be harmful to the child. References are included. Six short reactions to the paper are appended.

597. O'Donnell, C. Michael P. <u>A Comparison of the Reading Readiness of Kindergarten Pupils Exposed to Conceptual-Language and Basal Reader Prereading Programs. A Pilot Study. Final Report</u>. Augusta: Maine State Dept. of Education, 1968, 98p. [ED 029 709]

Seventy-eight kindergarten children were randomly placed in four experimental classrooms in this study, sponsored by the Cooperative Research Program of the U.S. Office of Education. Two of the classes were taught with the basal reader approach to reading readiness, and two were taught with the conceptual-language program approach. An extensive pretest battery was given to these children in October, 1967. Instruction in the two approaches was given from November, 1967, to May, 1968. At the end of the instructional period an extensive posttest battery was given to the children. This investigation was designed to test the effectiveness of the two methods of instruction in developing reading readiness in kindergarten. The conceptual-language program was found to be superior to the basal-centered program in promoting general readiness for reading.

598. Perlish, Harvey Neil. <u>Wordland Workshop</u>. Philadelphia, Pa.: Triangle Publications, Inc., Radio and Television Division, 1968, 66p. [ED 025 946. Document not available from EDRS. Available from Radio and Television Division of Triangle Publications, Inc., 4100 City Line Ave., Philadelphia, Pa. 19131]

Can and should the preschool child learn to read? To answer this and related questions, a study was conducted to determine the effectiveness of a television program and parental home assistance in teaching reading skills to three-year-old children. For five days a week over a thirty-nine-week period, an experimental group watched "Wordland Workshop," a program based on instructive word games; another group watched "Captain Kangaroo" to control for the Hawthorne effect. Data provided by pretests, posttests, initial questionnaires, final inventories, and parental monthly reports indicated nonsignificant differences between the two groups for all trait variables except health, which favored the control group, and number of siblings, which had no significant relationship to reading. The experimental group obtained significantly higher scores on the criterion variable, posttest reading performance. Significant relationships were found between this criterion and the following: health, child's interest in program, parental competence, parental interest, and child's interest in home-conducted reading activities. A consensus of experimental group parents reported that the children had apparently enjoyed the television reading program and the parental reinforcement activities.

599. Rosenthal, Muriel. A Comparison of Reading Readiness Achievement of Kindergarten Children of Disparate Entrance Ages. New York: City University of New York, Queens College, 1969, 52p. [ED 033 745]

This study investigated (1) the difference, if any, between the achievement in reading readiness of younger kindergarten children (four years and nine months, to five years and one month upon school entrance) and older children (five years and five months, to five years and eight months at entrance); (2) whether kinder- garten positively affects the reading readiness achievement of children regardless of age; and (3) whether younger kindergarten children with training equal the level of reading readiness attained by the older kindergarten children with training. The thirty-nine middle-class children were measured with the Lee-Clark Reading Readiness test after five weeks of school and again after ninety days. Results indicated (1) that there was a positive relationship between reading readiness achievement and kindergarten training in younger children, and (2) that without kindergarten training, maturation plays a large part in affecting children's reading readiness achievement. It was concluded that early exposure to formal school training is desirable for all children, and a reevaluation and revision of available reading readiness tests was suggested.

600. Walden, James D.; Smith, Carl B., eds. Diagnostic Teaching for Reading and Language. (Proceedings of the 1971 Elementary Language Arts Conference.) Bloomington: Indiana University, School of Education, 1972, 92p. [ED 073 431. Document not available from EDRS. Available from School of Education, Education Building, Bloomington, Indiana 47401 ($1.75)]

Eight papers presented at the conference for elementary language
arts and reading teachers at Indiana University are presented in
this bulletin. The papers have been organized to parallel the
order of their presentation: "Using Beginning Reading Materials
to Individualize," by Theodore Clymer; "Oral Language Misuses,"
by Kenneth Goodman; "Diagnostic Teaching: Implications of the
Administrator," by Leo Fay; "Composition: Product or Process,"
by James Walden; "Accountability in Language Arts Teaching," by
Carl Smith; "Reading Motivation Needed: Some Indirection," by
Michael Flanigan; "Recipe for Teaching the 'Unteachables' to
Read," by Mildred Freeman; and "Children, Books, and Diagnostic
Teaching," by Shelton Root. Introductory and concluding statements
have been added by Carl Smith and James Walden, co-directors of
the conference and co-editors of this publication.

601. Woodcock, Richard W. <u>Rebus as a Medium in Beginning Reading
     Instruction</u>. Nashville: George Peabody College for Teachers,
     Institute on Mental Retardation and Intellectual Development,
     1968, 35p. [ED 046 631]

While a great deal of attention has been directed to the potential
value of using symbol system other than the traditional twenty-six-
letter alphabet in the early stages of reading instruction, little
attention has been paid to the potential value of using rebuses.
In a linguistic sense, rebuses are symbols which represent entire
words or parts of words; by contrast, letters represent sounds.
A rebus may be pictorial, geometric, or even completely abstract.
To investigate the hypothesis that pupils learning to read with
rebuses would do significantly better than pupils presented the
same instructional material in traditional orthography (TO), two
samples of five preschool nonreaders each were exposed to a learning-
to-read situation. The results of the study demonstrated that
learning to read rebuses was markedly easier than learning to read
TO. Furthermore, the differences became even more disparate as the
complexity of the vocabulary and sentences increased. The results
implied that learning to read derives its problems and difficulties
primarily from the abstract nature of TO as a symbol system, not
from the nature of the reading process itself. It was suggested
that rebuses should be more widely used in beginning reading mate-
rials to reduce the learning load on the child. Tables and refer-
ences are included.

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019 667 (569)

Identification Tests
  032 599 (533)

Individualized Instruction
  073 421 (587)

Infants
  027 976 (500)

Informal Organization
  057 593 (586)

Instructional Materials
  002 600 (592)

Intellectual Development
  002 521 (580)
  014 332 (472)

Intercultural Programs
  033 248 (541)

Intervention
  054 866 (547)

Junior High Schools
  036 813 (512)

Kindergarten
  002 521 (580)
  011 814 (595)
  012 219 (497)
  028 167 (546)
  030 491 (498)
  032 599 (533)
  033 745 (599)
  042 580 (554)
  053 820 (514)
  054 866 (547)
  057 994 (501)
  063 600 (513)
  073 442 (499)
  080 944 (590)

Kindergarten Children
  002 594 (544)
  002 859 (555)
  010 058 (588)
  029 709 (597)
  040 834 (508)
  046 631 (601)
  058 011 (585)
  063 047 (530)
  071 048 (563)
  074 465 (573)

Language Arts
  038 175 (481)
  073 431 (600)

Language Development
  012 219 (497)
  024 532 (490)
  026 198 (516)
  028 167 (546)
  030 541 (477)
  037 245 (520)
  064 705 (525)

Language Instruction
  010 048 (542)

Language Learning Levels
  025 390 (575)

Language Programs
  033 248 (541)
  039 032 (484)
  039 932 (489)

Language Skills
  001 873 (475)
  054 866 (547)

Learning
  046 660 (571)

Learning Activities
  038 469 (471)

Learning Difficulties
  036 813 (512)

Learning Processes
  060 743 (582)

Learning Readiness
  • 032 599 (533)

Lesson Plans
  040 009 (488)

Letters (Alphabet)
  076 930 (507)

Linguistic Theory
  060 743 (582)

Literacy
  011 583 (545)

Literature Reviews
  059 854 (574)

Longitudinal Studies
  019 107 (589)
  029 710 (535)

Males
  076 930 (507)

Mexican-Americans
  010 048 (542)

Minority Group Children
  040 977 (583)

Models
  030 554 (579)

Motivation
  015 842 (506)

Native Speakers
  063 976 (511)

Negro Dialects
  074 465 (573)

Negro Mothers
  031 309 (523)

Negro Students
  032 193 (534)
  035 512 (577)

Nursery Schools
  046 644 (568)
  057 908 (526)

Objectives
  057 908 (526)

Orthographic Symbols
  046 631 (601)

Paired Associate Learning
  048 994 (578)

Paraprofessional School
Personnel
  067 642 (492)

Parent Counseling
  069 345 (517)

Parent Education
  065 837 (504)

71

Parent Influence
  031 309 (523)

Parent Participation
  025 946 (598)
  070 047 (527)

Parent Role
  057 987 (529)

Parent School Relationship
  0/0 047 (527)

Parent Teacher Cooperation
  057 987 (529)

Perceptual Development
  012 219 (497)
  065 854 (493)

Perceptual Motor Learning
  036 813 (512)
  073 442 (499)

Perceptually Handicapped
  013 119 (496)
  018 333 (494)

Personality Studies
  023 535 (522)

Phonetic Analysis
  018 333 (494)

Phonics
  033 004 (515)
  040 834 (508)
  063 579 (509)
  068 914 (558)
  074 444 (576)
  079 714 (564)

Physical Environment
  064 685 (594)

Pilot Projects
  029 709 (597)

Positive Reinforcement
  040 977 (583)

Prediction
  002 521 (580)

Predictive Ability
  029 710 (535)
  039 103 (532)

Predictive Measurement
  032 193 (534)
  059 854 (574)

Predictive Validity
  028 045 (537)
  032 195 (536)

Predictor Variables
  062 106 (539)

Prereading Experience
  010 977 (549)
  011 484 (572)
  026 198 (516)
  029 709 (597)
  046 9'ı (521)
  047 ʋ17 (505)
  0ɔ8 011 (585)
  3 600 (513)

Preschool Children
  ˑˑ 223 (553)
  ɪ4 332 (472)
  025 946 (598)
  026 198 (516)
  028 033 (551)
  028 045 (537)
  029 686 (561)
  029 705 (479)
  031 309 (523)
  046 678 (557)
  059 834 (550)
  063 976 (511)

Preschool Curriculum
  030 542 (476)

Preschool Education
  001 873 (475)
  012 685 (474)
  014 332 (472)
  015 839 (473)
  030 541 (477)
  057 593 (586)

Preschool Learning
  019 107 (589)
  069 346 (518)

Preschool Programs
  001 813 (478)
  026 198 (516)
  027 072 (486)
  037 245 (520)
  038 175 (481)
  038 469 (471)
  041 419 (428)
  079 693 (485)

Preschool Tests
  010 977 (549)
  028 045 (537)
  029 710 (535)

Preschool Workshops
  025 946 (598)

Primary Grades
  001 064 (556)
  013 193 (503)
  028 846 (487)
  072 413 (560)
  076 930 (507)

Principals
  034 078 (581)

Prognostic Tests
  015 118 (538)

Program Descriptions
  027 976 (500)
  033 759 (482)

Program Development
  014 332 (472)
  057 994 (501)

Program Effectiveness
  027 072 (486)
  037 245 (520)

Program Evaluation
  012 685 (474)
  027 072 (486)
  027 976 (500)
  028 846 (487)
  029 705 (479)
  033 759 (482)
  038 175 (481)
  039 932 (489)

Program Proposals
  028 820 (502)

Psychological Patterns
   011 223 (553)

Psychomotor Skills
   053 820 (514)

Questionnaires
   042 580 (554)

Readiness
   028 820 (502)
   036 813 (512)
   041 419 (528)

Readiness (Mental)
   002 594 (544)

Reading
   001 855 (567)
   056 035 (510)
   064 685 (594)
   065 837 (504)
   069 347 (519)

Reading Ability
   001 064 (556)

Reading Achievement
   002 859 (555)
   010 058 (588)
   010 977 (549)
   011 223 (553)
   012 685 (474)
   014 414 (559)
   015 118 (538)
   019 107 (589)
   029 710 (535)
   032 193 (534)
   032 195 (536)
   038 263 (524)
   044 256 (591)
   067 642 (492)
   069 347 (519)
   072 413 (560)
   079 693 (485)

Reading Comprehension
   010 058 (588)
   030 542 (476)

Reading Development
   010 058 (588)
   011 223 (553)
   060 743 (582)
   069 345 (517)

Reading Diagnosis
   034 001 (483)
   073 431 (600)

Reading Difficulty
   002 859 (555)
   034 078 (581)

Reading Games
   064 705 (525)

Reading Improvement
   034 001 (483)
   065 837 (504)
   079 693 (485)

Reading Instruction
   010 058 (588)
   011 583 (545)
   011 814 (595)
   012 219 (497)
   013 193 (503)
   024 532 (490)
   029 686 (561)
   039 103 (532)
   043 475 (584)
   063 579 (509)
   064 685 (594)
   068 914 (558)
   070 047 (527)
   071 048 (563)
   072 413 (560)
   073 421 (587)
   073 431 (600)
   074 444 (576)
   074 465 (573)
   080 944 (590)

Reading Material Selection
   069 347 (519)

Reading Materials
   002 600 (592)
   011 484 (572)
   046 628 (593)
   065 837 (504)
   065 855 (570)
   073 431 (600)

Reading Processes
   046 631 (601)
   048 994 (578)
   075 803 (565)

Reading Programs
   003 355 (540)
   015 842 (506)
   024 532 (490)
   057 994 (501)

Reading Readiness
   001 855 (567)
   001 873 (475)
   002 594 (544)
   002 600 (592)
   002 604 (543)
   003 355 (540)
   010 048 (542)
   011 484 (572)
   011 485 (566)
   011 814 (595)
   014 414 (559)
   019 107 (589)
   023 535 (522)
   025 390 (575)
   026 208 (548)
   028 820 (502)
   029 163 (552)
   029 709 (597)
   030 491 (498)
   030 554 (579)
   031 309 (523)
   032 195 (536)
   033 745 (599)
   038 258 (596)
   039 103 (532)
   040 009 (488)
   040 834 (508)
   040 977 (583)
   042 573 (495)
   042 580 (554)
   044 256 (591)
   046 991 (521)
   047 017 (505)
   048 994 (578)
   053 820 (514)
   057 987 (529)
   058 011 (585)
   059 854 (574)
   063 600 (513)
   063 976 (511)
   064 705 (525)
   065 854 (493)
   065 855 (570)
   067 642 (492)
   069 346 (518)
   070 047 (527)

Reading Tests
011 484 (572)
013 119 (496)
015 118 (538)
024 544 (531)
026 208 (548)
063 047 (530)

Reading Research
001 064 (556)
010 977 (549)
011 484 (572)
011 485 (566)
015 842 (506)
028 033 (551)
029 163 (552)
030 541 (477)
030 544 (579)
034 078 (581)
038 258 (596)
038 263 (524)
040 009 (488)
040 834 (508)
042 580 (554)
043 475 (584)
046 631 (601)
046 644 (568)
046 660 (571)
046 678 (557)
059 834 (550)
060 743 (582)
062 106 (539)
065 855 (570)
068 914 (558)
071 048 (563)
072 413 (560)
073 447 (499)
074 444 (576)
074 465 (573
075 803 (565)
079 693 (485)
079 714 (564)
091 667 (569)

Reading Skills
030 554 (579)
058 011 (585)
063 600 (513)
065 837 (504)
074 465 (573)

Reading Tests
024 544 (531)
032 195 (536)

Remedial Reading
018 333 (494)
057 994 (501)

Remedial Reading Programs
034 078 (581)

Research
001 855 (567)

Research Design
053 820 (514)

Research Needs
025 390 (575)

Research Reviews
(Publications)
059 854 (574)

Retarded Readers
079 414 (564)

Retention
059 834 (550)

Scientific Methodology
046 678 (557)

Second Language Learning
063 976 (511)

Self Concept
002 859 (557)

Sensory Training
030 491 (498)
042 573 (495)
046 660 (571)

Sequential Approach
043 475 (584)

Sequential Learning
030 554 (579)

Sight Method
071 048 (563)
079 714 (564)

Skill Development
015 842 (506)

Social Class
032 193 (534)

Social Development
027 072 (486)

Social Environment
064 675 (594)

Spelling
056 035 (510)

State Standards
011 814 (595)

Structural Analysis
046 628 (593)

Student Motivation
001 813 (478)

Student Teacher Ratio
034 003 (491)

Surveys
001 064 (556)

Syllables
075 803 (565)

Syntax
046 628 (593)

Task Performance
063 047 (530)

Teacher Attitudes
001 873 (475)

Teacher Characteristics
039 932 (489)

Teacher Rating
032 193 (534)

Teaching Guides
013 193 (503)
069 346 (518)
069 347 (519)

Teaching Methods
029 709 (597)
040 977 (583)
041 419 (428)
057 593 (586)
063 579 (509)
069 345 (517)

Teaching Techniques
053 820 (514)
057 908 (526)
076 930 (507)

Televised Instruction
025 946 (598)

Test Construction
032 599 (533)

Test Results
056 035 (510)

Test Selection
024 544 (531)

Time Factors (Learning)
038 258 (596)

Training
046 644 (568)

Tutorial Programs
027 976 (500)
057 994 (501)

Unit Plan
042 573 (495)

Unites of Study (Subject
Fields)
002 604 (543)

Urban Schools
035 512 (577)

Verbal Communication
028 167 (546)

Verbal Development
038 469 (471)

Verbal Learning
046 678 (557)

Visual Discrimination
002 604 (543)
028 033 (551)
046 644 (568)

Visual Learning
069 346 (518)

Visual Perception
013 119 (496)
065 854 (493)
067 642 (492)

Vocabulary Development
091 667 (569)

Word Recognition
046 660 (571)
059 834 (550)
063 579 (509)
068 914 (558)
071 048 (563)
079 714 (564)

Word Study Skills
063 047 (530)